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THE RELATIONSHIP OF CHILD PERCEPTIONS TO ACHIEVEMENT AND BEHAVIOR IN THE EARLY SCHOOL YEARS.
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THIS RESEARCH EXPLORED CERTAIN RELATIONSHIPS BETWEEN THE PERCEPTIONS OF CHILDREN AND THEIR BEHAVIOR DURING EARLY SCHOOL YEARS. SPECIFIC OBJECTIVES WERE--(1) TO DETERMINE IF CHANGING PERCEPTIONS OF SELF AND THE WORLD ARE ACCOMPANIED FROM YEAR TO YEAR BY CHANGES IN BEHAVIOR AND ACHIEVEMENT AND (2) TO SEE IF A KNOWLEDGE OF A CHILD'S PERCEPTIONS CAN BE USED TO PREDICT LATER BEHAVIOR AND ACHIEVEMENT. TO ACCOMPLISH THIS, DATA WERE COLLECTED ON APPROXIMATELY 60 CHILDREN OVER 3 YEARS AS THEY PROGRESSED FROM KINDERGARTEN TO THE SECOND GRADE. CORRELATION ANALYSES OF ALL INFORMATION GAINED ON THE STUDENT CHARACTERISTICS OF PERCEPTION, BEHAVIOR, AND ACHIEVEMENT SHOWED A NUMBER OF GENERAL CONCLUSIVE RESULTS. AMONG THESE WERE--(1) THE FEELING OF PERSONAL ADEQUACY SEEMED TO HAVE AN ALL-PERVASIVE IMPORTANCE IN A CHILD'S PERCEPTUAL ORGANIZATION. (2) THE VALUES HELD BY TEACHERS WERE REVEALED IN THE JUDGMENTS THEY MADE IN THE BEHAVIOR OF CHILDREN. (3) RELATIONSHIPS BETWEEN CHILD PERCEPTION AND BEHAVIOR AS DESCRIBED BY THEIR TEACHERS SHOWED A POSITIVE BUT LOW CORRELATION. (4) CHANGES OCCURRED IN CHILD PERCEPTIONS AND IN BEHAVIOR WITH PROGRESSION FROM KINDERGARTEN TO FIRST GRADE. (5) PERCEPTUALLY ORIENTED STUDIES OF CHILDREN WERE USED TO PREDICT, SIGNIFICANTLY, BEHAVIOR A YEAR IN ADVANCE. (6) PART-TIME OBSERVERS, RATHER THAN FULL-TIME TEACHERS, WERE USED EFFECTIVELY TO PROVIDE MUCH OF THE SIGNIFICANT RESEARCH DATA. THIS STUDY WAS ESSENTIALLY A PILOT PROJECT. THE FINDINGS WERE FELT TO SUGGEST THE NEED FOR FURTHER RESEARCH AND FOLLOWUP PROGRAMS. (JH)

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THE RELATIONSHIP OF CHILD PERCEPTIONS TO ACHIEVEMENT AND BEHAVIOR IN THE EARLY SCHOOL YEARS

Cooperative Research Project No. 814

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TABLE OF CONTENTS

		Page No.
Acknowledgements		v
List of Tables		vii
Chapter I	The Problem	1
Chapter II	The Research Design	18
Chapter III	Perception and Behavior in the Kindergarten Year	53
Chapter IV	Perception and Behavior in the First Grade	81
Chapter V	Changes in Perception and Behavior from Kindergarten to First Grade	104
Chapter VI	Prediction of Behavior from Perceptual Orientation	126
Chapter VII	General Conclusions	140
Bibliography		153
Appendix		156

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A.W.C.

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LIST OF TABLES

Page No.

1. Age and Intelligence Levels of Children in the Experiment 21
2. Loadings on Eight Perceptual Data Factors from Kindergarten PC Data 54
3. Perceptual Data Factor I--General Adequacy, Kindergarten Study 59
4. Perceptual Factor II--Acceptable to Teachers, Kindergarten Study 61
5. Perceptual Factor III--Adequate to the Curriculum, Kindergarten Study 61
6. Perceptual Factor IV--Strong Enough, Kindergarten Study 62
7. Perceptual Factor V--Important to Adults, Kindergarten Study 63
8. Perceptual Factor VI--Important to Teachers, Kindergarten Study 63
9. Loadings on Six Factors from the Behavioral Data for Teachers I and II--Kindergarten Study 65
10. Behavior Factor A--The Fully-Functioning Child, Kindergarten Study 67
11. Behavior Factor B--The Good Student, Kindergarten Study 68
12. Behavior Factor C--The Good Child, Kindergarten Study 70
13. Intercorrelations of Perceptual Factors with Behavior Factors, Kindergarten Study--Teacher I 72
14. Intercorrelations of Perceptual Factors with Behavior Factors, Kindergarten Study--Teacher II 73
15. Intercorrelations of Perceptual Factors with Vital Statistics, Kindergarten Study--Teacher I 79
16. Intercorrelations of Perceptual Factors with Vital Statistics, Kindergarten Study--Teacher II 80

17. Population--First Grade Study 81

18. Factor Loadings on Eight Perceptual Factors, First Grade Study 82

19. Perceptual Factor I--General Adequacy, First Grade Study 84

20. Perceptual Factor II--Acceptable to Teacher, First Grade Study 85

21. Perceptual Factor III--Adequate to the Curriculum, First Grade Study 87

22. Perceptual Factor IV--Strong Enough, First Grade Study 87

23. Perceptual Factor VI--Important to Teachers, First Grade Study 88

24. Perceptual Factor IX--Others Friendly, First Grade Study 88

25. Loadings on Seven Factors from the Behavioral Data, First Grade Study 91

26. Average Ratings for Each Teacher on the Behavior Rating Scale 92

27. Behavior Factor A--The Fully-Functioning Child, First Grade Study, Teacher III 93

28. Behavior Factor B--The Good Student, First Grade Study, Teacher III 94

29. Behavior Factor C--The Good Child, First Grade Study, Teacher III 94

30. Intercorrelations of Perceptual Factors with Behavior Factors, First Grade Study--Teacher III 96

31. Intercorrelations of Perceptual Factors with Vital Statistics, First Grade Study--Teacher III 101

32. Intercorrelations of Perceptual Factors with Vital Statistics, First Grade Study--Teacher IV 103

33. Differences between Means of Perceptual Ratings from Kindergarten to First Grade--Total Group 105

34. Differences of Means of Perceptual Ratings from Kindergarten to First Grade--Teachers II and III 109

35. Differences of Means of Perceptual Ratings from Kindergarten to First Grade--Teachers I and IV 110

36. Perceptual Items showing Changes in Direction in Class Working with Teachers I and IV Compared with Class Working with Teachers II and III 111

37. Means and Differences of Behavioral Ratings from Kindergarten to First Grade--Teachers II and III 118

38. Changes in Composition of Behavior Factor A--The Fully-Functioning Child from Kindergarten through Second Grade 119

39. Changes in Composition of Behavior Factor B--The Good Student from Kindergarten through Second Grade 120

40. Changes in Composition of Behavior Factor C--The Good Child from Kindergarten through Second Grade 121

41. Correlations of Perceptual Changes from Kindergarten to First Grade with Behavior Changes from Kindergarten to First Grade for Groups Working with Teachers II and III 123

42. Correlations of Behavior Score Predictions made in Kindergarten with Teacher Ratings Made in First Grade for the Total Group 128

43. Correlations of Behavior Score Predictions Made in Kindergarten with Ratings Made by Teacher III in First Grade 130

44. Correlations of Behavior Score Predictions Made in Kindergarten with Ratings Made by Teacher IV in First Grade 131

45. Correlations of Behavior Score Predictions Made in First Grade with Teacher Ratings Made in Second Grade for the Total Group 132

46. Loadings on Eight Perceptual Data Factors from Kindergarten PT Data 186

47. Loadings on Eight Perceptual Data Factors from Kindergarten PO Data 187

CHAPTER I

THE PROBLEM

Modern psychological theory assigns a crucial role to the child's perception of self and of the world about him as causative agents of behavior. If this position is accurate, then an understanding of the nature of children's perceptions and the relationship of perceptions to achievement and behavior in school is essential knowledge for educational planning and curriculum building. We have vast quantities of information concerning children's behavior as seen from the position of the outsider, but we know very little about how things look from the point of view of the child himself. This research was designed to shed some light on the relationships existing between the ways in which children perceive themselves and the world in which they live, on the one hand, and the ways in which they behave in school, on the other.

From its earliest days American psychology has approached the study of behavior primarily from an external frame of reference. That is to say, the behavior of a person is observed from the point of view of an outsider. The causes of behavior are sought in the stimuli or forces exerted upon the individual. Using this approach psychologists have been able to make great advances in our understandings of human activity. It is still the dominant frame of reference used for much of our study of human beings.

In more recent years a new frame of reference has captured the attention of many psychologists. In contrast to the external view, it seeks the causes of the individual's behavior in the behaver's personal experience. It is called the "internal frame of reference" because it attempts to understand behavior from the point of view of the behaver, himself, rather than from the point of view of an outsider. This new way of looking at people and their behavior has added a new dimension to psychological thought and opened exciting new possibilities for increasing our understanding of the nature and function of human beings. The internal frame of reference has sometimes been called "the Third Force." Among its ranks are included psychologists calling themselves existential, phenomenological, transactional, perceptual, personalistic, and self psychologists. By whatever name they are called, however, the psychologists in this movement are much concerned with the individual's own experience of his world. Many students have begun to make research contributions designed in the perceptual view but this is a comparatively new way of exploring human behavior, and we need to know a great deal more about people looked at from this perspective.

From the perceptual-existential orientation the causes of behavior lie in the perceptual organization of the behaver, the individual's "perceptual field." Combs and Snygg (1959), for example, postulate that "all behavior is a function of the perceptual field of the behaver at the instant of his action." In this theoretical framework how an individual behaves is a function of how he is perceiving at any moment. In particular, the behavior of the individual will be a function of how he is perceiving,

a) himself (the self concept) and, b) the world in which he is operating and the interaction of these two.

Perceptual psychologists give particular importance in the determination of behavior to the role of the individual's self concept. This central role of the self concept in the determination of behavior has captured the interest of many psychologists and research on the self concept is currently one of the most active areas of psychological exploration. An examination of this research provides us with much support for the belief that the individual's self concept plays a crucial role in his behavior. The nature of the individual's self concept appears to determine how successful the individual is likely to be in dealing with many aspects of his life situation. Clinical psychologists, for example, have often observed that a child's success in the skill subjects of school such as reading, writing, and spelling are directly related to his ideas about himself. There is increasing belief, also, that the nature of the self concept is crucial to the psychological health and adjustment of the individual (ASCD, 1962).

While a good deal of research is now available on the self concept, most has been carried out with adolescents or adults. To this point there is very little research on children's perceptions and none at all on the self concepts of very young children.

Most of the research on the behavior of children currently available has been designed in the external frame of reference. From this we have learned much about children and their behavior from the viewpoint of the outsider, but we know very little about how things seem to the child himself. The present research was designed to explore the nature of children's perceptions in the early school years and the relationship of these perceptions to their behavior in school.

This study was originally conceived as the opening phase of a long term, longitudinal study which would follow the same group of children throughout their educational experience from kindergarten through high school. As part of that plan it was intended to begin with an investigation of the perceptions and behavior of a group of children as they entered school in kindergarten and moved on through first grade. It was also expected that this project would provide opportunity to test certain methodological questions involved in phenomenological-perceptual approaches to research. These initial goals have been met. It has been necessary, however, to scrap the original plan for a study that would follow the children throughout their school careers. That plan proved to be much too ambitious and expensive of professional time and money. The study was therefore terminated at the end of the second year after following the same group of children from kindergarten through the first grade.

Specifically, this research sought answers to three questions:

1. What is the relationship between the child's perceptions of self and his world, on the one hand, and his current behavior and achievement in school on the other?

2. Are changing perceptions of self and the world accompanied

by changes in behavior and achievement?

3. Can behavior and achievement be predicted from a knowledge of the child's perceptions of self and his world the previous year?

THEORETICAL BACKGROUND

To explore these questions, the research was designed in terms of four basic principles from perceptual-phenomenological psychology first stated by Snygg and Combs (1949) and later revised by Combs (1959). They are as follows:

1. The behavior of an individual at any moment is a function of his perceptual field at that moment. While other authors in the Third Force movement have not been inclined to be so all-inclusive as the Combs and Snygg (1959) statement, they, nevertheless, see behavior as a function of the individual's current state of being, experiencing or meaning. They seek the causes of behavior in the individual's existing state. That is to say, the individual's behavior at any moment is understood as a function of how things seem to him at that moment (the existential condition).

2. The individual's perceptions about the self are crucial in the causation of behavior. Of all the perceptions existing for an individual none are so important as those he holds about himself. Some of these are of fleeting importance. Others are of great significance to him. Combs and Snygg (1959) have used the term "Phenomenal Self" to refer to the total organization of all the individual's self definitions. The self concept they

define as that particular organization of self perceptions regarded by the individual as important or central aspects of his being. It is what the individual regards as "I" or "me." The self concept is learned as a consequence of the individual's interactions with the world about him in the process of his growing up but, most particularly, from his interaction with the significant people in his life.

Once established, the self concept has a high degree of stability at its core but is always open to some degree of change as a consequence of new experience. Since the self concept is conceived as the individual's basic frame of reference it has tremendous significance in the determination of his behavior. Teachers, clinical psychologists, social workers and many others engaged in human relations activities have observed repeatedly that a person tends to behave in ways appropriate to the self he conceives himself to be.

This intimate relationship between the individual's perceptions of self and behavior has also been found in a number of research studies. In fact, research on the self concept is currently one of the most active areas of psychological study. A recent review of the research by Wylie (1961), for example, lists 493 studies related to the topic.

3. _The basic need of the organism is the maintenance and enhancement of the self._ In the perceptual psychology of Combs and Snygg (1959) the self concept, once established, becomes the very center of the individual's existence and every behavior is

related in more or less degree to his fundamental need for its maintenance and enhancement. The self is thus engaged in a never ending search for adequacy expressed by Combs and Snygg as "that great driving, striving force in each of us by which we are continually seeking to make ourselves ever more adequate to cope with life" (1959, p. 46). This insatiable search of the individual for adequacy involves him in two kinds of activity. On the one hand he must seek to maintain the self of which he is aware and, on the other, he seeks to enhance the self, to move it toward its optimum condition.

4. _The concept of self actualization_. A number of psychologists have been attempting to define the nature of the supremely healthy individual (ASCD, 1962). Seeing the individual as continuously engaged in a process of striving toward self-actualization or self-realization, they have asked, "What would such person be like?" Reviewing these studies Combs (1962) has arrived at the conclusion that truly adequate persons are characterized by four perceptual characteristics:

a. A positive view of self
b. Openness to experience
c. Strong feelings of identification
d. A rich, varied and available perceptual field.

The four principles stated in the paragraphs above provide the basic theoretical framework within which this research has been designed. If the child's perceptions of himself and his world are as important as these principles imply, we need to know how the child's perceptual world grows and develops during the school years. It is in the hope of shedding some light on these problems that this research has been designed.

A Methodological Problem of Perceptual Research

Perceptual psychology confronts a difficult methodological problem not present in research carried out in more traditional forms of psychology. Research designed in the external frame of reference is usually able to investigate its problems by a straightforward measurement of the forces or stimuli which seem to be related to or produce the observed behavior. In the internal frame of reference the problem is more difficult. People's perceptions lie inside them and are never available to direct measurement. As a consequence the Third Force psychologist must usually approach the investigation of his subject's inner-life by an indirect process of inference. This he does by a process of "reading behavior backwards." Since behavior is a function of the individual's perceptions, then, from careful observations of behavior it should be possible to infer the nature of the perceptual field which produced the behavior in the first place. These inferences can then be checked against further observations until, by a repeated process of observation--inference--prediction--observation--inference, etc., the observer can come closer and closer to accurate understanding of the subject's perceptual field. This is the basic technique used by the perceptual psychologist to study the perceptual organization of people.

The use of inferences as research data is often distressing to psychologists accustomed to working in the more orthodox external frame of reference. They miss the apparent solidity of external measurements. The use of inference in research is not new, however. The physical sciences have been using it effectively for many years. Through inference the physicist is able to deal with electricity or atomic particles which no one has ever seen and the astronomer can locate stars outside the range of his telescope. Without the use of inference many of our great advances in physical science could never have been made. Inferential research can be highly accurate and controlled when it is clearly understood and properly handled. In essence, in psychological practice it accepts clinical judgment, itself, as research data. It regards the experimenter himself as a research instrument, capable of providing valid and useful data. This is sometimes known as the "Self as Instrument" principle.

Research can be carried out with any data providing it is a) pertinent to the problem and b) collected with care from reliable instruments. The research instruments of perceptual psychologists are people. A person, as he stands, is neither reliable nor unreliable. He may be either. Like any other scientific instrument he must be fitted to the data collection as required by the problem to be explored. The use of inference does not excuse the psychologist from the same discipline of rigorous care and control of his instruments and procedures as those employed by more orthodox workers.

Some investigators have attempted to use the direct approaches of external psychology for the exploration of perceptual problems. As a consequence the research literature, particularly with respect to the self concept, is in a remarkable state of confusion. Most of the research, supposedly on the self concept are not studies of the self concept at all! Most of them are studies of the _self report_--a quite different concept. The confusion seems to have come about because of a widespread misconception concerning the self concept. Many experimenters have assumed that the self concept is consciously and clearly available to the individual at any moment and can be easily reported by him to someone else when asked to do so. Actually, the self concept and the self report are two quite different functions.

The self concept is a complex organization of the ways in which an individual regards himself at every level of awareness from those aspects which may be brought into clear figure to those so vague and diffuse as to be impossible to symbolize. It is a dynamic organization of _perceptions_. The self report, on the other hand, represents what the person is willing, or able, or can be tricked into saying about himself when asked to do so. It is a self description, _a behavior_, not a perceptual organization. Combs and Soper in a discussion of _The Self, Its Derivate Terms, and Research_ (1957) have listed six reasons why the self concept cannot be used in a one-to-one relationship with the self report. These are as follows:

1. _The clarity of the subject's awareness_. The self concept varies in degrees of clarity. Some concepts of self at any

moment are in clear figure while others may be immersed in ground. Whether or not they may be reported to others will depend in some measure on whether they can be truly called into clear figure at the moment they are asked for.

2. Lack of adequate symbols for expression. Self descriptions can only be reported in words. Words, however, are notoriously inadequate and may not mean the same things to others as they mean to the subject. The degree to which the self report approaches the self concept is thus open to all the errors of any human communication.

3. Social expectancy. We can never quite escape the effects of our society, no matter how hard we may try. In our society it is customary for the individual to hide his true concepts of self even if he is able to report them accurately.

4. Cooperation of the subject. The accuracy of the self report depends greatly on the motivation of the subject. Even with the best of intentions to cooperate, a subject may be quite unable to give the desired information accurately for reasons of which he himself is not clearly aware.

5. Personal adequacy and freedom from threat. In general, the more adequate the individual feels, the more likely his self report will approach an accurate description of the self concept, other factors being equal. The more threatened, inadequate, or maladjusted the individual the more vulnerable will be his concepts of self and the greater the necessity for him to defend the self.

6. The effect of "set" on field organization. The perceptual field of an individual looking at himself is not the same as the individual's perceptual field in the midst of his behavior. The instant the individual is asked to report upon his behavior or self perceptions his field has changed. It is no longer an accurate description of the state of affairs which has been producing his behavior up to that moment.

In view of the above sources of error involved in attempts to measure perception by direct report an approach to the problem through inferential means seems more likely to produce reliable results (Combs, Soper and Courson, 1963). Accordingly, in this study the nature of children's perceptions about themselves and the world they live in have been studied by using research observers, themselves, as research instruments in the fashion advocated by psychologists working with perceptual-existential problems.

RESEARCH ON CHILDREN'S PERCEPTIONS

Although a great deal of interest has been shown in the problem of child perceptions in recent years, at the time of this writing very few research reports are available. Gordon and Combs (1958), in a review of the research on children's perceptions to that date, report only a very few studies on the perceptions of young children. Among these are:

Fauls and Smith (1956) studied children's perceptions of their own and parents' sex roles. They found five year olds had already clearly identified with the appropriate sex role and perceived their parents as showing correct roles.

Kagan (1956) found a trend toward perceiving same sex parents as more threatening as children grew from six to ten years of age. Fathers were also consistently perceived as less friendly and more dominating than mothers.

Hawkes, Burchinal and Gardner (1957) confirmed Kagan's findings and reported further that children generally viewed their relations with parents as satisfactory with girls reporting somewhat more favorably than boys.

More recently, three other cooperative research projects have been completed or are currently underway having to do with the self concepts of children. Bledsoe (1961), for example, has been exploring the self concepts of elementary children as these relate to academic achievement, intelligence and manifest anxiety. (Cooperative Research Project No. 1008). Brookover (1960), using a self report questionnaire demonstrated a relationship between "self concept" and the academic achievement of junior high school students. (Cooperative Research Project No. 845). He is currently investigating whether academic achievement can be changed through an attack upon students' self concepts. (Cooperative Research Project No. 1636).

In 1959 Estvan and Estvan published an interesting study on children's perceptions of their social world. In this study the Estvans asked children to react to several series of pictures. These pictures had to do with various aspects of rural and urban life, social status levels and with a number of situations showing children and adults in interaction. From a study of children's reactions to these pictures the authors were able to isolate a number of general tendencies in children's attitudes toward these events.

Self Report Studies with Young School Children

In a study of children's perceptions of teacher's feelings, Davidson and Lang (1960) found that children's perceptions of teacher's feelings toward them correlated positively with self perceptions and achievement.

Hamachek (1960) carried out a study of "the self image" which he defined as "the thoughts and feelings which constitute a person's awareness of his individual existence, his perceptions of what he has, his conception of who he is, and his feelings about his characteristics, qualities and properties." With a hundred children in grade three through seven, Hamachek explored four aspects of the self image: 1) physical self image, 2) social self image, 3) achievement self image and 4) intellectual self image. Using a questionnaire technique he found that children classified as high status on mental age, reading age, and education age exhibited a more positive intellectual self image and achievement self image.

Shaw and Brown (1957), Shaw and Grubb (1958), Shaw, Edson, and Bell (1960), in a series of studies of bright underachievers, found differences in the self concept exist between achievers and underachievers. Male underachievers, they found, seem to have more negative feelings toward themselves than do male achievers.

Research on Children's Perceptions Using an Inferential Approach

One of the earliest studies using inferential technique is that of Malpass (1953) who explored the relationship between seventh grade student perceptions of school and their academic achievement. Children's perceptions were inferred from their responses on a sentence completion test, a set of pictures depicting various school situations, and a written personal document. Correlating the children's scores on these perceptual instruments with school success, Malpass found that perceptions of school are not significantly related to the results of standardized achievement tests but seem to be more closely related to achievement as measured by teacher's grades.

LaVerd (1961) attempted a study of the self concept of thirteen and fourteen-year-old students from achievement related statements on the Thematic Apperception Test. He found a "significant improvement of the prediction of academic success by adding the Thematic Apperception Test motivation scores to the multiple correlation prediction of the California Achievement Test and the California Test of Mental Maturity."

Another study on the relationship of the self concept to academic achievement was carried out by Fink (1961; 1962) who studied groups of high and low achieving ninth grade students. Students were rated on their degree of adequacy by a psychologist who made ratings from the California Psychological Inventory, Bender Visual Motor Gestalt Test, Draw-A-Person Test, Gough Adjective Check List, and a personal data sheet and a brief essay describing "What I Will Be in Twenty Years." Results seem to indicate a positive relationship between the child's level of academic achievement and the adequacy of his self concept as inferred by the judges.

Walsh (1956) made a study of two groups of bright boys from second to fifth grade who were low achievers or satisfactory achievers. She used Driscoll Play Kit materials to involve the boys individually in situations that might reveal aspects of their self concepts. Self concepts were then inferred from their verbal responses and the kinds of manipulations they carried out with the dolls in the Driscoll Play Kit. Lower achievers, she found, tended to perceive themselves in ways that restricted their action. They were unable to express feelings appropriately and adequately, felt criticized and rejected or isolated.

The researches reported above provide some isolated bits of information concerning children's perceptions of themselves and the world. It is apparent, however, that we need to know a great deal more about these matters. Modern perceptual psychology ascribes a very important role to the individual's perceptions as causative of behavior. This theoretical position has frequently been stated also by many educators concerned with the teaching of young children. The importance of the individual's perceptions and particularly those he has about himself as they affect behavior is further corroborated by a great deal of clinical evidence. As we have seen above, however, a review of the research on children's self concepts leaves much to be desired.

It is apparent that while we know a great deal about children from an external point of view, we know very little about children and their perceptions as they appear from their own positions. If child perceptions are as important as modern theory would suggest we need a great deal more research on this question. This research was designed to shed some light on this problem by an exploration of children's perceptions in the early school years and the relationship of these perceptions to their behavior.

CHAPTER II

THE RESEARCH DESIGN

The purpose of this research was to explore three questions with respect to children's perceptions and their achievement in school. These were as follows:

1. What is the relationship between the child's perceptions of self and his world on the one hand, and his current behavior and achievement in school on the other?

2. Are changing perceptions of self and the world accompanied by changes in behavior and achievement?

3. Can behavior and achievement be predicted in one year from a knowledge of the child's perceptions of self and his world the previous year?

THE CHILDREN AND THE SCHOOL

To answer the above questions the research project was designed to explore the perceptual organization and school achievement of a group of children as they entered school in the kindergarten year and continued through first grade. The subjects of the experiment were 61 children; 33 boys and 28 girls who entered the kindergarten of the P. K. Yonge Laboratory School in the fall of 1960. This school is operated by the College of Education of the University of Florida. It has a school enrollment of 950 pupils ranging from kindergarten through high school. In addition to its primary responsibilities in the education of its students, the P. K. Yonge School also serves three other functions:

1. As an observation center. College students preparing to be teachers use the school as a laboratory for the observation of teachers and children in action.
2. As a participation center. Selected students from the College of Education are assigned for short periods as teacher-helpers or "participants."
3. As a research center. The Laboratory School faculty and some members of the faculty of the College of Education carry on various research projects within the school.

The school is located on its own campus about a quarter of a mile from the University proper. It is attractive and adequate, but not outstandingly different from many schools in the State. In fact, at the time it was built, the budget was purposely held to a figure consistent with the resources of the average Florida school system of comparable size. Although many schools in Florida are now desegregated, at the time this study began, the P. K. Yonge School included only white children. The quality of the teaching staff is probably somewhat better than average but varies widely.

In the primary school there are two classes at each grade level, usually with an enrollment of 30 students each. However, this may occasionally vary by a student or two as in our research group which includes a class of 31 and a class of 30. The school accepts students on a "first come, first served" basis upon application from anywhere in the county. A waiting list is maintained for each grade and openings are filled from this list in order as they occur, except that an equal balance of boys and girls is maintained in each class.

A further restriction assures that no more than 40 percent of the students come from university families. Despite the school's attempts to maintain a good cross section of the white community in its classes, the application and waiting procedure exerts a considerable selective effect, so that mean intelligence scores for these children tend to be significantly above the average. Table 1 shows the chronological age of the children in the experiment at the time they entered kindergarten and the intelligence level of the 52 children remaining in the experiment as measured by a shortened form of the Wechsler Intelligence Scale for Children at the time they had reached the first grade.

TABLE 1

Age and Intelligence Levels of Children in the Experiment

	Boys			Girls			Total		
Chronological Age (months)	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
October 1, 1960	33	64.4	4.65	28	62.9	2.8	61	63.7	3.88
Intelligence Quotient									
May, 1962									
Verbal*	30	120.7	13.97	22	115.9	15.26	52	118.7	14.73
Performance**	30	116.5	13.73	22	112.9	16.06	52	115.0	14.87
Total	30	120.6	13.25	22	115.9	15.79	52	118.6	14.56

* Information, Comprehension, Arithmetic and Vocabulary Scales.

** Picture Completion, Picture Arrangement, Block Design, Object Assembly Scales.

Note: Intelligence test information collected by Dr. Mary Lamy (1963) whose doctoral dissertation was based on the same children as this research.

THE RESEARCH DATA

To answer the questions posed by the research three kinds of data were required:

1. Perceptual data--inferences concerning the child's ways of perceiving himself and his relationships to his world.

2. Behavioral data--descriptions of the child's characteristic ways of behaving in the school setting.

3. Behavior predictions--predictions concerning the child's behavior made from perceptual data in one year to be compared with behavior descriptions in the next.

The Perceptual Data

Data on the perceptual organization of each child was obtained by a series of inferences made as a consequence of observing the child under five kinds of conditions. All inferences were made by a staff of observers specially trained for this purpose.

The particular perceptions chosen for exploration in the study were determined by the research staff with the assistance of consultants from the College of Education Research Division during the six months pilot study. This group first set down a long list of perceptions of the child's self and his world which, on theoretical or practical grounds, seemed likely to be of major importance in producing his behavior. These were next consolidated in a series of staff conferences into a list of about 65 promising items descriptive of perceptual states and with a minimum degree of overlap. The research staff then tested the items on kindergarten children like those the research would be working with the following year. Following this, items were again discussed with the research team and consultants in staff conference and revised, modified, consolidated, tested and retested with kindergarten children. After three months of this procedure the research staff had produced a list of 39 perceptual items for investigation in the study.

Definitions for these perceptual categories were then set down in the form of instructions for scoring the Perception Score Sheet as follows:

Definitions for Perception Score Sheet

I Perceptions of Self

SA--Self Generally

1. Adequate--Inadequate

This category refers to the child's overall feeling of adequacy. It represents a global feeling of being fulfilled, enough, sufficient, as contrasted to feeling ineffectual, lacking or the like. It should be recognized that it is possible for a child to feel generally adequate while at the same time possibly feeling inadequate with respect to some individual items on our check list.

SAI--Self as Instrument

This section has to do with various categories describing how the individual perceives himself as an instrument for carrying out his purposes.

2. Able--Unable

This category refers to the way in which the individual sees himself as a person able or unable to do what is expected or needful for him to do. It represents an evaluation of self as an instrument to live effectively. Includes feeling of having necessary skills. Has to do with activities rather than physical condition (see next item).

3. Strong--Weak

   This category is primarily concerned with the individual's physical evaluation of self. It represents his judgment of his body strength as an instrument for carrying out his purposes. Does he feel his body is what it needs to be to make it possible for him to get along in the world? Does he feel his physical condition is sufficient to make of his body a trustworthy instrument for getting along physically?

4. Attractive--Unattractive

   This category has to do with the feeling of the individual concerning his attractiveness to others. It represents his feeling about whether he has the physical or behavioral attributes necessary to make him appealing to other people. For little girls this category may often be synonymous with "pretty." For little boys this category is much less likely to be associated with looks or appearance and is, perhaps, more closely associated with descriptions like "cute," or "all boy."

5. Worthy, lovable--Unworthy, unlovable

   This category is used to describe the individual's feeling about himself as being loved, wanted, or appreciated. It refers to his feeling of being a person of dignity and integrity, of deserving and receiving love and respect of other people.

SWC--Self with Other Children

These categories refer to the child's perceptions of his relationships with his peers.

6. Important--Unimportant

   This category refers to the child's feeling of importance, of having prestige, of being a person of status; not a person to be overlooked or ignored, but a person whom others take into account. This concern may be for either positive or negative reasons. A child might feel important, for example, because he was sick or "bad." The category refers to an individual's feeling that he is somebody of consequence.

7. Liked--Unliked

Refers to the child's feeling of being liked or unliked by other children. Feeling of being liked, wanted, sought by other children.

8. Able to cope--Unable to cope with other children

Refers to a feeling on the part of the child that he has what it takes to hold his own in interaction with other children. Feels he can cope with them rather than being overwhelmed or helpless before them. Feels sure that he is, as a person, "enough" to deal with other children.

Opposite--Feels that he is lacking, unsure that he possesses whatever is needed to deal with other children, in danger of being overwhelmed by them, helpless before them.

9. Identified with--Alienated from other children

Refers to the child's feeling of belonging, of being in with or part of the events his peers are involved in. A feeling of being welcomed by other children, of being included when he desires to be so.

Opposite--Feeling of being isolated from, perhaps scapegoated, rejected by, walled out.

SWA--Self with Adults

These categories refer to the child's perceptions of his relationships with the adults of his world other than teachers.

10. Important--Unimportant

Sees self as being important to adults, having status, prestige. Being a person of some consequence of significance. Not a person to be overlooked or ignored, but a person whom adults are concerned about.

Opposite--Feeling of being of no-account, immaterial, insignificant, a person whom adults may be indifferent to.

11. Liked by--Not liked by Adults

This refers to a feeling of being liked by adults, of being pleasing to, cherished by, cared for.

Opposite--To be rejected, disliked, not cared for.

12. Able to cope--Unable to cope with Adults

This refers to the child's feeling of being competent to deal with adults. It has to do with his feeling of being equal to the business of interacting with adults, of being capable of handling adults effectively.

Opposite--Feeling of being powerless before adults, of being impotent, defenseless, or helpless in the face of adult demands and actions.

13. Satisfactory to--Unsatisfactory to Adults

Refers to the child's feeling of being enough or sufficient to please adults. Of being adequate to meet their expectations.

Opposite--Feeling of being unable to meet expectations of the adults in his world.

SWT--Self with Teachers

These categories will be practically identical with those immediately above, but apply specifically to relations with teachers. See descriptions under Self with Adults for suggestions for these categories.

14. Important--Unimportant to Teachers

15. Liked by--Not liked by Teachers

16. Able to cope--Unable to cope with Teachers

17. Satisfactory to--Unsatisfactory to Teachers

18. Adequate to cope--Inadequate to cope with School

This category is an overall category with respect to the child's feeling about his success in school. It refers to his feeling of being able or unable to cope with the school and its demands. It refers to the child's feeling of being able to hold his own, to deal with what is expected of him in the school curriculum. The word curriculum is used here in its broadest educational sense including not only the subject matter, but the child's feeling of his ability to get along with teachers and students in a happy and satisfying way. It is not intended to be a category summing up, the items below having to do with the specific aspects of the curriculum. Rather, it is a category designed to refer to the child's general feeling of being able to cope successfully with the total school experience in the sense of being a place where he lives a part of his life.

SSC--Self and the School Curriculum

These items refer to feelings of adequacy in the various school subjects and are self-explanatory.

19. Enough in reading--Not enough

20. Enough in writing--Not enough

21. Enough in numbers--Not enough

22. Enough in music--Not enough

23. Enough in art--Not enough

24. Enough in oral expression--Not enough

25. Enough in athletics--Not enough

This category has to do with the child's feeling of adequacy with respect to athletics, that is to say, with respect to activities involving physical prowess.

26. Enough in games, puzzles, etc.--Not enough

This category is distinguished from the one above in referring to the child's ability to deal with games which do not involve athletic ability. It is included particularly for the younger children to take into consideration such things as puzzles, card games, and more sedentary activities of this sort.

II Perceptions of Others

In this division of the score sheet we are concerned with the question of how the child sees other people in contrast to the categories above where we have been concerned about how the child sees himself.

POC--Perceptions of Children

27. Others satisfying--Dangerous

In this category we are concerned with how the child sees other people as devices for fulfilling his own needs. Other children may be seen as satisfying one's needs to be liked, wanted, etc.

28. Others friendly--Unfriendly

This category refers to the child's perception of others as approachable or friendly when he makes contact. It differs from the above in that a child might see other children as satisfying to his needs yet unfriendly and rebuffing to him. Sees other children as receptive to his reaching out to them or as hostile and rebuffing of such attempts.

POA--Perception of Adults

These categories refer to general perceptions of adults other than teachers.

29. Adults friendly--Hostile

This category refers to the child's perception of adults as approachable, welcoming or rebuffing to child.

30. Adults helpful--Hindering

Adults are need fulfilling or need frustrating or depriving. Adults are seen as a source of satisfaction of one's wants, hopes, desires. Adults are facilitating to one's goals and purposes.

31. Adults interested--Not interested

Adults are seen as interested in child. Adults might seem friendly but not interested. Adults generally feel that what the child is concerned about has importance and value as opposed to making child feel his values and goals are trivial, unimportant, etc. Interest or concern may not be positive.

32. Adults predictable--Unpredictable

Adults are predictable. They can be counted on. Their behavior toward child is seen as sufficiently stable (perhaps even in negative fashion) that it can be expected and banked upon.

POT--Perception of Teachers

Like descriptions for adults just above.

33. Teachers friendly--Unfriendly

34. Teachers helpful--Hindering

35. Teachers interested--Not interested

36. Teachers predictable--Unpredictable

POS--Perception of School

These categories refer to child's perceptions of the school.

37. School is challenging--Boring

Refers to how child sees curriculum in broadest sense, including relations with others. An overall feeling about whether school is an exciting place.

38. School helpful or hindering place

Satisfies child's needs, is seen by child as facilitating and helping to fulfill his needs and purposes or hindering, hampering, frustrating these.

39. School a happy place--Sad place

Fun to go to or a place to avoid and steer clear of.

The Perception Score Sheet

During the six months pilot phase, simultaneous with the development of the perceptual categories, a Perception Score Sheet was made and revised over and over as the thinking about the perceptual categories changed. The Perception Score Sheet finally adopted is shown in Appendix A. It consists of a series of five-point rating scales, one for each of the 39 perceptual categories, to be scored by the trained observers of the research staff following each contact with a child.

The face sheet of the Perception Score Sheet also provided space for the observer to place his own number and the date of the contact. The child's name was written in one corner of the heading in such a fashion that, after the record had been filed with the project secretary, the name of the child could be removed and the child's code number placed on the record. Room was also provided to write a longhand description of the child's behavior following the particular contact reported on the PSS. See sample case, Appendix A.

Procedure for Making Perceptual Inferences

Perceptual inferences were made about each child as a result of observations made in five kinds of settings divided into two general series.

A. The Observation Series (PO)

   1. Three observations made on a child in his classroom
   2. A half-hour interview

The Observation Series provided an opportunity to observe the child in settings normally open to any observant teacher in the course of her usual contacts with the child.

B. The Projective Test Series (PT)

   1. A half-hour free play in the playroom (PLA)
   2. A "Situations" Test (SIT)
   3. A Picture-Story Test (PST)

The Projective Test Series was composed of a number of "projective" situations commonly used in clinical settings but unlikely to be used in the daily practice of teachers.

A. The Observation Series

1. The Classroom Observations. In this series of observations each child was observed for three half-hour periods in his normal class activities. Observations were made on succeeding days and at different times of the day whenever possible. When first assigned a child, the observer took the assignment slip to the teacher who pointed the child out to him. The child was then observed for a half-hour period. Each classroom in the P. K. Yonge Laboratory School has an observation room equipped with a one-way screen and most observations were made from here. However, if the teacher took the class to the playground, to the library, lunchroom, gymnasium or on a trip, the observer followed along as unobtrusively as possible keeping his subject in sight. During these observations the research observer sought to "get the feel" of the child and to infer the nature of his perceptions from the behavior in which he saw the child engaged. Each observer sought to [illegible] empathy with the [illegible] to experience events as best he could from the child's own perspective. These inferences were then checked against further observations of behavior until, by a process of observation--inference--testing against further observation--inference--testing, etc., repeatedly, the observer was able to arrive at a perception score value and support his position on evidence of the behavior he had observed. Immediately after each half-hour observation the observer scored his inferences concerning the child's perceptions on the Perception Score Sheet. In this fashion, inferences

concerning the child's perceptions were made three times as a result of classroom observations.

2. *The Interview.* On completion of the three classroom observations, the same observer next interviewed the child for a half-hour. To do this he called for the child at the classroom door and the teacher excused the child in his care. The observer then took the child to some setting in which they could be alone and in which the child felt as comfortable as could be managed. Usually, this meant that the observer and the child would sit on one of the benches on the playground. However, if the weather was bad, the interview was likely to take place in the student lounge, ordinarily vacant during school hours. During the interview the observer sought to engage the child in conversation designed to get the feel of the child and to understand the nature of the ways in which the child saw himself and the world in which he was operating. This was not done by accepting what the child said at face value but by treating these conversations, like any other behavior, as data from which inferences could be made. The interview also provided the observer opportunity to check hunches formed in the observation phase and to probe for more data on score sheet items still in doubt. At the end of a half-hour the child was returned to his classroom and the observer inferred the nature of the child's perceptions on the Perception Score Sheet and recorded a written summary of his observations.

Although the observer made perceptual ratings of the child following each observation and interview, only the last of these reports was utilized for the research (called the PO record, for "Perceptions from Observations"). Since all observations and interviews were made by the same observer and since he could not, of course, divorce himself from his previous observations, the final report made on each child represents a cumulative record made from all observations in the series. Only this final PO record was employed as measures of children's perceptions made from observations and interview. See Appendix A for sample case.

B. The Projective Test Series

Perceptual inferences were made for each child in the study from three kinds of projective test sessions; free play, a "Situations" Test and a Picture Story Test. These inferences were made during the same four or five day period in which the child was being observed and interviewed in the fashion described above but by a different research observer.

1. *The Free Play Session* (*PLA*). Observations of each child in the play sessions were made in the play therapy room of the guidance suite in the laboratory school. This is a room especially designed for play therapy use. One wall of the playroom is a blackboard extending to floor level. Other walls are tile and so is the floor. In one corner a large sandbox is available and along one side of the room is a counter and sink at child height. For this research the room was furnished with tables and chairs of standard kindergarten-first grade size and an array of toys was available to the child on the low shelves along one

wall. The research observer would call for the child at the door of the classroom and take him to the playroom. Here the child would be given an opportunity to engage in free play for a half-hour.

The techniques used in this phase of the study were worked out during the six months pilot study and research observers were carefully trained in playroom technique during a three-month period in the fall before beginning the collection of the research data. During the play period the observer attempted to set the child at his ease, talk with him, play with him, and generally utilize the half-hour to get the "feel" of the child and his approach to his world. Every effort was made to keep the situation as unstructured as possible leaving the child free to move in whatever directions he wished. At the end of a half-hour the observer returned the child to his classroom and immediately recorded his inferences about the nature of the child's perceptions of self and his world on the Perception Score Sheet.

2. _The Situations Test (SIT)_. The Situations Test used in this research was adapted from projective techniques often used in clinical diagnosis. The test material consisted of a scale model of the child's own classroom on a large piece of plywood with walls about two inches high. Each class unit in the P. K. Yonge School consists of an indoor classroom and an outdoor activity area about the same size as the indoor classroom and surrounded by a brick wall. This indoor and outdoor space is separated by large glass doors. The floor plan of this area, including the

two small toilet rooms and the teacher's office which make up a typical class space, was reproduced in scale to serve as an arena in which the child might manipulate doll figures of a teacher and boys and girls as well as many items of classroom furniture like those in his actual experience.

The Situations Test was developed and tested during the six months pilot phase of the study and research observers spent three months in the fall learning the procedures before collecting research data. The test was administered in the following manner: The examiner would call for the child at the classroom door and bring him to the playroom as before; usually the next school day after the play session. This time, however, no other toys or equipment were available and the child's attention would be directed to the Situations Test. The observer would usually begin by looking over the Situations Test material with the child, calling his attention to the fact that it was similar to his own classroom, pointing out the various features involved and demonstrating how the furniture, "teacher" and "students" could be manipulated. Following this, the child was encouraged to manipulate the materials in any way he pleased while the observer watched or engaged him in conversation about what was going on. Near the end of the half-hour period, after the child had had an opportunity to utilize his own imagination freely, the observer would pose a number of specific, or "set" situations. These consisted of situations, like the following, designed to determine the child's reactions to certain life problems:

A. The observer builds a small house of blocks, places two dolls inside the house and brings a third doll close, saying, "If somebody has built a house and this child wanted to go in with them, what would happen?" "Show me what would happen next," etc.

B. Sitting one doll on top of a pile of blocks or cars the observer would say, "If somebody had all the blocks (or cars) and this other child wanted some, what would happen then?" "Show me, what would happen next," etc.

C. Showing dolls playing and one doll strikes another, the observer says, "These children are playing and this child hits this one over the head with a block. What happened then?" "And after that?" etc.

D. "This child has brought his favorite truck (or doll) to school and this child wants it. What happens?" "And then what?" etc.

E. Manipulating one doll so that he knocks the teacher's clock off the table the observer says, "This child knocked the teacher's favorite clock off the table onto the floor and it broke. What happens?" etc.

During the half-hour period the observer formulated his inferences about the child's perceptions and tested these against further observations of behavior. At the conclusion of the Situations Test period the child was returned to his classroom door and the examiner would immediately score his inferences on the Perception Score Sheet.

3. *The Picture-Story Test (PST)*. The third projective device administered the next school day after the Situations Test was a Picture-Story Test. This test was devised during the six months pilot study preceding the research. The seven pictures used in the test were selected as follows: Early in January, preceding the beginning of the research in September, 1960, a graduate student artist was employed to make a series of sketches showing children in various relationships to their peers, to the school, to teachers and to adults outside the school setting. The general subjects were suggested by the research staff and from these the student artist made a series of sketches purposely lacking in detail so that the pictures would not "tell their own story." Thirty of these pictures were next tested on kindergarten children over a three months period and the least productive were gradually eliminated until only the seven used in this research remained. These seven depicted the following scenes:

Picture P 8 (peer relationship) Shows two boys and two girls playing with a ball in front of a window. Inside the window with a book under his arm is another child looking out at them.

Picture P 11 (peer relationship) This picture shows three small boys and one larger one standing in a group in front of some steps leading to a door over which is a sign "Public School." One of the boys holds a stick in one hand. A little girl is standing at one side apparently watching.

Picture S 2 (relationship to school) Shows child with dog standing before teacher who holds sheet of paper in her hand.

Picture S 10 (relationship to school) Shows a woman sitting at a desk. Little girl is handing her a piece of paper.

Picture S 16 (relationship to school) An empty school room except for child sitting at desk with head in hands. Before him on the desk is an open book.

Picture A 7 (relationship to adults) Woman at sink wiping dish looks at little boy holding out to her a paper marked "Report Card."

Picture A 18 (relationship to adults or school) Woman with papers in hand is entering door marked "office." Two little girls are behind her, one holds a book, the other is pointing toward the woman.

The procedures for administering this test were worked out during the six months pilot study and research observers were given a three months training period in its use before collecting data for the research. The test was given in the play therapy room from which all play things were removed or locked up except a table, two chairs and a tape recorder. The session began by calling the child's attention to the tape recorder. The recorder was turned on and the child was given an opportunity to talk for a little while into the recorder after which it was turned off and set to play back. The child was thus given an opportunity to see that he was recording his own voice. Following this, the examiner showed the child, one by one, the set of pictures, directing the child in each instance to tell him a story about the picture. The technique for this presentation, of course, varied from child to child but followed, in general, the usual procedures for picture-story tests. Each child was asked to tell a story about each picture and was given as much encouragement as possible. When he had completed the story the observer would ask such questions as: "What happened then?", "How did he (she) feel about that?", "And then what?" etc., in order to get further information on which to make perceptual inferences. For these very young children the Picture-Story Test did not ordinarily take the full half-hour. A few moments at the end of the period were therefore usually employed in asking the child to do some writing on the board, to sing a song or perform some act designed to give the observer insight into his feelings about the curricular aspects of school. At the completion of the half-hour the child was returned to his classroom. Immediately after listening to and analyzing the child's tape recording, the observer recorded his inferences on the Perception Score Sheet along with a written summary of his observations.

The three projective test situations making up this phase of the investigation were carried out on consecutive days as nearly as possible. Since the same observer worked with the child in each of the test situations, the third report was really a cumulative record of the child's perceptions obtained from inferences made in the three kinds of test situations. This final score was the only one used as measures of perception from the projective sessions and was called the PT results. (Perceptions from Tests) See Appendix A for sample case.

The Comprehensive Perception Scores (PC)

To arrive at a comprehensive rating of the child's perceptions of himself and his world from both observation and projective test data, a comprehensive score was obtained as follows: As soon as PO and PT scores were filed by the appropriate observers with the research secretary, an appointment was made with one of the directors of the project to arrive at a comprehensive rating. This was done through a case conference technique conducted as follows:

1. Each observer first reported on his general impressions of the child and on the child's general feelings about himself and his world.

2. Setting aside the PO and PT records the three staff members (two research observers and a director) then proceeded to score each item of a new score sheet as a consequence of the discussion of these three staff persons. Where disagreements about scores occurred, discussions were carried on until a consensus could be arrived at. This completed score sheet was called the PC (Comprehensive perception rating) and was used in the statistical phases of the research as measures of children's perceptions of themselves and the world. See Appendix A for sample case.

3. When the PC record had been completed, the staff members turned their attention to predicting what the child would be like the following year. This process was begun by a general

discussion among the three staff members about the child and the probable implications of his ways of seeing himself and his world.

4. When this discussion had run its course, the staff members next made out a Behavior Rating Sheet (see discussion below), attempting on each item to predict how the child's teacher would rate his behavior the following year. This data was needed for the prediction phase of the research discussed later in this report.

The case conference procedure for making these ratings usually took a minimum of two hours and often ran much longer. It was followed for each of the 61 children in the project. The procedures described here for making perceptual inferences were identical in both the kindergarten and first year phases of the study. On completion of the PC conference score sheets containing perceptual data from observations, tests and from both combined were coded and filed to await statistical treatment.

The original plan of the research called for separate analyses of data obtained from all three kinds of sources; that is, from observation procedures (PO data), test situations (PT data) and from both of these combined (PC data). The factor analyses in the kindergarten year, however, showed the same factors being obtained from all three sets of data in practically identical magnitudes. Separate analyses were therefore not repeated for the first grade year of the study and only PC data has been utilized for this research report.

The Training and Reliability of Observers

Since human perceptions lie inside people and cannot be measured directly by any means now at our command, the exploration of perceptual organization must be accomplished by a process of inference from carefully observed samples of the subject's behavior.

This means the research observer, himself, becomes an instrument of research and the value of the data he gathers will be dependent upon a) his skill as an observer and b) the reliability of his ratings. To assure the requisite skill of the observers in this research, staff members were chosen in the first place for their sensitivity and empathy with children. They were then subjected to an intensive period of training in making the kind of inferences needed for this research. Their reliability was checked before they began the collection of data and again in the statistical analysis of the data after it had been collected.

The procedures for making the perceptual inferences described above were worked out by the research staff in the six months pilot study which preceded the research proper. During this period every aspect of the research was tested repeatedly by the directors and the research consultants. By far the largest portion of time during the pilot study was devoted to the problem of working out procedures for making perceptual inferences and in training observers to do this efficiently and reliably. In the pilot phase (Spring, 1961), research assistants observed kindergarten children, worked with them in the various test situations and checked each set of inferences with those of directors and each other member of the research team until a high level of comparability was obtained. As a result of this six months pilot experience, training procedures were developed to be used by the research team which would carry out the research proper in the fall of 1961.

Selection and Training of Observers: Graduate students in the College of Education at the University of Florida were first carefully screened for persons showing high degrees of sensitivity to people, empathy, and broad experience in working with children. Suitable persons were then employed for the purposes of this study and subjected to a three month training period. During this training period they worked with children from the same school but not included in the research group, under the supervision of the directors of the project. New observers first watched the project directors working with children, then graduated to working with the children themselves with less and less supervision as they learned the procedures. Each assistant was assigned a child whom he observed, interviewed or worked with in the playroom. Following each session all persons involved made out Perception Score Sheets on the child and these were discussed in conference at great length with the directors and other members of the staff. In addition, the entire staff met several times a week to discuss problems involved in the methods of observation and to think through various aspects of the collection of data as needed. Work was rotated so that each observer in training worked in tandem with each project director and with every other member of the research staff.

During the three months involved in this kind of training, a series of reliability checks on the observers was carried on to assure a high level of agreement in the perceptual inferences being made. The reliability of scorers was checked in two ways: 1. by testing agreement between two observers rating the same child and 2. by teaming each observer with each other research assistant and with each of the project directors. No attempt was made to apply refined statistical techniques to the question of reliability in this phase of the study since this could be done much more effectively in the research proper in two ways: a. by means of the communality scores obtained in the factor analyses and b. from a comparison of scores from PO and PT data obtained by different scorers on the same child. (See next chapter)

During the pilot and training phases reliability was considered satisfactory when agreements between observers showed: 1. 75 percent of the ratings within a range of one scale division and 2. a pattern of satisfactory agreement records with other members of the research team. All members of the research team were meeting these criteria by the end of the three months training period and were then assigned to research subjects for the making of perceptual inferences. Each child was seen by a team of two observers: one, a man and the other, a woman. One observer made perceptual inferences about the child as a result of observations and interview (PO data) and the other observer made perceptual inferences about the child as a result of three half-hour periods in the testing room (PT data) as described above. All observers were forbidden to discuss the children at any time and observers who had any accidental knowledge of children were not permitted to work with those children. Although each child was scored for both kinds of data, working schedules were worked out in such a fashion that observers made observations of children in one class and tested children in the other class so that the children who were tested or observed would have been seen only under one or the other condition by a given observer.

The Behavioral Data

In the upper years, schools generally have much data concerning student behavior and accomplishments in the form of school grades, achievement test results, counseling and guidance records, health records and the like. In the long term longitudinal study originally contemplated for this research, it was planned to make much use of such information. In the present research, dealing only with the kindergarten and first grade, however, the problem of gathering objective data about children's behavior was much more complicated. For the children of this study, just beginning school, the accumulated records available in upper grades did not yet exist. Even grades could not be used as measures. They are not given in the kindergarten and first grade years of this school because the faculty prefers to report child progress to parents by letter or in parent conferences. Nor does the school give achievement tests to such young children; in kindergarten there is little formal schooling to be measured and in first grade children have not yet had sufficient exposure to the formal aspects of school to make such testing in any wise reliable.

The behavioral data on the children in this research were, therefore, collected from two sources: 1. from observations and ratings made by the child's teachers and 2. from the vital statistics on each child contained in the school records. These ratings were scored on a Behavioral Data Score Sheet prepared for the purpose as follows:

1. During the pilot phase of the study, members of the research staff and research consultants of the college first listed all of the behavior descriptions it seemed possible could be rated by teachers with accuracy or which could be derived from other sources.
2. These items were discussed at great length and reduced to approximately 40 items which seemed feasible for collection.
3. Items were next discussed with the kindergarten and first grade teachers who would later be involved in the research to determine whether they believed they would be able to rate the youngsters accurately on these items. As a result of these discussions some items were removed

and others were added. This left a Behavioral record sheet of 29 items each to be scored on a five-point scale by the teacher. An additional six items of vital statistics proved to be obtainable from the school records.

4. The data sheet was next tested by having teachers rate a number of kindergarten children to determine whether they ran into any unforeseen difficulties in making ratings. When the teachers expressed themselves as satisfied with the procedure, the Behavioral Data Score Sheet was adopted for use in the research. (See Appendix A)

Items included in the Behavioral Data Score Sheet were as follows:

GENERAL BEHAVIOR

1. Secure--Insecure
2. Independent--Dependent
3. Emotionally Stable--Unstable
4. Spontaneous--Rigid
   Flexible--Defensive
5. Aggressive--Retiring
6. Energetic--Apathetic
7. Attractive--Unattractive
8. Outgoing--Withdrawing
9. Cooperative--Uncooperative
10. Dependable--Undependable
11. Leadership (high-low)
12. Cheerful--Sad
   Happy--Sullen
13. Creativity (high-low)
14. Hostility (low-high)
15. Attention Span (long-short)
17. Accept. to boys (high-low)
18. Accept. to girls (high-low)
19. Accept. to status peers (high-low)
30. Coordination of small muscles (good-poor)
31. Coordination of large muscles (good-poor)

SPECIFIC SKILLS

20. Reading
21. Numbers
23. Music
24. Self-care
32. Oral Expression
33. Written Expression
34. Art
35. Handwriting
36. Work Habits

VITAL STATISTICS

25. Chronological Age
26. Mental Age
27. Weight
28. Height
29. Absences due to illness (September to March 1)
37. Sex

Reliability of the teachers' scores on the Behavioral Data Score Sheet was demonstrated in the factor analysis of these results reported in the next chapter. Behavioral Data Score Sheets were made out for each child in March or April of each year of the study. Teachers were supplied score sheets during that period and requested to complete them for each child making out no more than two at any one sitting. Vital statistics information for the data sheet was obtained and recorded by the project secretary from the school records. When all score sheets had been completed, data was transferred to IBM cards and subjected to statistical procedures.

Behavior Prediction Scores

One of the questions asked by this research was, is it possible to predict from a child's perceptual organization in the present to his behavior the following year? To test this question a third kind of data was required: Behavioral Prediction Scores which could be correlated with the behavioral ratings made a year later. These were obtained in the manner already described. Predictions were scored on a Behavioral Data Score Sheet exactly like that used for the teacher ratings. These Score Sheets were marked "prediction scales" and were filed to be compared with the behavioral ratings made by the teacher the following year. (See Sample Case, Appendix A)

In the following year, when the teachers' behavioral ratings were available, correlations were run between the predicted behavioral ratings made by the research staff and the ratings made by the teacher.

Statistical Procedures in the Research Design

Utilizing the data gathering procedures described above the research had the following data for each child, each year.

1. A Comprehensive Perceptual Score Sheet (PC data) made out by the research team.
2. A Behavioral Data Score Sheet (BD) made out by the child's teacher.
3. Vital statistics obtained from the school records.
4. A Behavioral Prediction Score Sheet (BDP) made out by the research staff.

The original plan of the research called for intercorrelations of each item of the perceptual data with each item of the behavioral data. This procedure would have resulted in nearly 5000 intercorrelations extraordinarily difficult to interpret. It was therefore decided, in consultation with statistical experts, to subject these correlations to factor analysis. In this way the number of correlations could be reduced to a more workable volume. At the same time more significant relationships would be discriminated from the data. Five factor analyses were run on the data for the kindergarten year, three on the perceptual data and two on the behavioral data as follows:

1. From PO (inferences from observation) data.
2. From PT (inferences from tests) data.
3. From PC (inferences from both kinds of observations) data.
4. Behavioral data scored by Teacher I.
5. Behavioral data scored by Teacher II.

The first step in the process was to arrive at an intercorrelational analysis of each set of data. These correlations were then factor analyzed on the University IBM 709 computer under the supervision of Dr. Wilson Guertin, the research statistical consultant. All factor analyses employed the same computer program. The first factor analysis was for the purpose of estimating communalities which were substituted in the intercorrelation matrix for the second factor analytic run. Complete centroid solutions were rotated to orthogonal approximations of simple structure by the quartimax program. When this was done the factor analyses of the three sets of perceptual data proved to be so closely identical that it was possible to eliminate the PO and PT results and work with the PC results alone.

Similar procedures were followed to obtain factor analyses in the first grade and second grade years of the study. In the first grade, however, factor analyses were made only on the PC perceptual data and on each of the two teacher's behavioral results. In the second grade, factor analyses were run only on the behavioral ratings made by the two teachers.

The perceptual factors and behavioral factors obtained by these procedures were subjected to further statistical analysis to answer the questions posed by the research. These are reported in the chapters following.

The Kindergarten Year 1960-61

In May and June of 1960 the directors interviewed candidates for research assistants. Two men and two women graduate students in Education were chosen. Early in September the research office was opened and the training of research observers was begun as described above.

A few days after the opening of school the research staff held a meeting with the two kindergarten teachers. At this time all procedures which concerned them were reviewed. The necessity for restricting all communication about a child to matters solely concerned with getting him to and from the staff was also pointed out to the teachers. It was emphasized that no other information should pass from teachers to observers at any time.

Early in the fall it is customary for the kindergarten teachers to hold an evening meeting with the parents of their students. On this evening the directors met with the parents, the research was explained in general terms and parents were given an opportunity to raise questions concerning the project. Very few questions were raised and the parents expressed themselves as satisfied with the nature of the project and ready and willing to cooperate in any way.

The collection of perceptual data began early in January. It was completed by the end of April. Behavioral Data Score Sheets were distributed to the kindergarten teachers March 15 and were completed and filed by May 15.

The First Grade Year 1961-62

The procedures employed for the first grade portion of the research were identical with those of the kindergarten year except that no meeting with the parents was needed since the research was concerned with the same children. The data collection was begun and ended on approximately the same dates as the kindergarten year.

The number of children observed in the first grade year, however, was somewhat less than the kindergarten year. The first grade study included 31 boys and 22 girls, total 53, remaining from the kindergarten year.

The Second Grade Year 1962-63

The only new data collected in the second year was the Behavioral Rating Score Sheets on each child. These were needed for correlation with the prediction scores made the year before. This data was collected in March and April in the same manner as for preceding years. By the second grade the population of the research had fallen to 44--25 boys and 19 girls.

Chapter III

PERCEPTION AND BEHAVIOR IN THE KINDERGARTEN YEAR

FACTOR ANALYSIS OF THE PERCEPTUAL DATA

It will be recalled that three kinds of inferences concerning the perceptual organization of the children involved in the study were made:

1. Inferences from observations and interviews (PO)
2. Inferences from projective test situations (PT)
3. Inferences made from the two above sources combined (PC)

Factor analyses of the PC perception scores are shown in Table 2. Factor analyses of PO and PT data are shown in Tables 46 and 47, in Appendix D and E.

The Comparability of PO, PT and PC Results

In the original research design it had been expected that inferences made from observations and from projective test materials would provide different kinds of data. The differences between inferences made from these two sources, however, turned out to be negligible. In the remainder of the research, therefore, it was decided to eliminate further analysis of PO and PT data (See Appendix B and C) and to make all analyses from PC data alone. (Table 2)

The comparability of the factor analyses made from PO and PT data in this research is of interest on three counts:

1. Since inferences from these two sets of data were made by different observers working quite independently, the comparability of results found in these factor analyses provides an

TABLE 2

Variable No. & Name	Loadings on Eight Perceptual Data Factors I	II	III	IV	V	VI	VII	VIII	Kindergarten PC Data Communality
1. Adequate	93	-13	06	-09	-08	-12	03	04	91
2. Able	86	-24	08	07	-07	-06	02	-01	82
3. Strong	57	-05	-16	54	-09	-08	04	04	67
4. Attractive	78	-10	04	03	15	07	-09	-06	66
5. Worthy, lovable	89	-06	04	-11	11	-11	-03	04	83
6. Important with Children	87	-22	-18	08	-11	05	-01	02	87
7. Liked by Children	82	-12	-04	-05	-21	-03	-14	08	77
8. Able to cope with Children	83	-21	-11	-03	-18	08	15	-03	80
9. Identified with Children	84	-17	-13	01	-05	06	-13	15	80
10. Important to Adults	71	05	-06	-04	54	-01	-04	03	81
11. Liked by Adults	84	17	-02	-03	14	-05	-23	-06	81
12. Able to cope with Adults	82	02	11	-05	26	00	24	-13	84
13. Satisfactory to Adults	80	10	12	04	30	-26	-01	-23	87
14. Important to Teacher	63	13	-15	05	00	53	01	04	72
15. Liked by Teacher	51	69	01	14	-02	10	02	04	77
16. Able to cope with Teacher	71	31	04	-01	04	25	18	-10	70
17. Satisfactory to Teacher	68	48	13	-16	11	-07	-03	-22	80
18. Adequate to cope	86	-01	19	09	-19	10	-01	11	85
19. Enough reading	61	07	59	-05	-08	-06	18	-03	77
20. Enough writing	53	04	65	-14	09	-04	08	14	76
21. Enough numbers	63	05	55	04	05	01	-07	-10	73
22. Enough music	30	07	23	22	-01	11	-21	-13	27
23. Enough art	28	-14	41	-11	-09	-01	-24	-03	34
24. Enough oral expression	66	-15	04	07	11	24	17	-05	57
25. Enough athletics	45	-14	-08	61	-07	07	01	00	61
26. Enough games, etc.	43	03	50	19	-15	-03	-36	-01	62
27. Others satisfactory	80	-11	09	21	-07	01	19	27	81
28. Others friendly	84	-01	01	01	-10	11	-08	17	76
29. Adults friendly	80	22	00	-16	25	-17	18	-12	85
30. Adults helpful	62	26	04	-19	40	-26	-13	-07	74
31. Adults interested	66	03	-05	-06	54	09	08	00	74
32. Adults predictable	65	09	00	-14	21	-08	07	-42	68
33. Teachers friendly	60	52	01	-20	04	14	09	04	71
34. Teachers helpful	46	72	01	-12	-01	-15	-08	08	78
35. Teachers interested	70	22	-13	02	-03	39	-02	-09	72
36. Teachers predictable	58	51	-12	17	-03	25	01	-34	81
37. School is challenging	63	20	02	30	-08	11	-14	22	61
38. School is helpful	76	27	-02	-07	-33	-02	-30	05	86
39. School is a happy place	87	12	-25	07	-17	-21	03	04	91
Communality	19.4	2.5	1.9	1.2	1.4	1.0	.7	.7	28.9
Percent of Variance	67.1	8.65	6.5	4.1	4.8	3.46	2.4	2.4	74.1

indication of the reliability of the scoring procedures used in this research. The reliability of any data places an upper limit upon the correlation which can be obtained between it and other data. Since factor analyses are derived from intercorrelation matrices the nearly identical factors obtained in this research would have been impossible unless the data had had reliability to begin with. The comparability of the factors found in the analysis of PO and PT data is thus an indication of the reliability of the perceptual data collected by the research observers. Other indications of this reliability are to be found in the factor analysis communality scores reported below and the behavior predictions made from perceptual analyses reported in Chapter VI.

2. The reliability of data demonstrated in these findings is also of interest in a broader sense as it relates to the more general problem of research methodology. Perceptual or phenomenological research is dependent upon inference for the exploration of its problems. This requires the use of the research observer, himself, as an instrument of research, a procedure which more traditional approaches to psychological thought have sometimes considered too unreliable for good practice. Psychologists working in the perceptual-phenomenological frame of reference, however, have maintained that use of the observer as a research instrument is not inherently unreliable and with proper safeguards can be made to produce data with a high degree of stability and reliability. The results of the factor analyses obtained

in this research clearly seem to support that position.

3. The comparability of inferences made from the two quite different sources, observation and projection, found in this research is of interest for another reason. Such results differ considerably from usual clinical experience. Behavioral ratings made from different kinds of data generally are found to differ significantly. It must be recalled that the results of this research, however, have to do with perception, not behavior. The relationship of perception and behavior in perceptual theory is of a genus-species character. Perception determines behavior but any given perception may be expressed in a wide variety of specific behaviors depending upon other factors in the perceptual field at the instant of action. A child's perception of himself as "liked," for example, may lead him to behave in quite different ways in interaction with his teachers, parents, peers, at home, on the playground, by himself, etc. The stability of personal perceptions, furthermore, is a function of the centrality or importance of the perception in the individual's personality organization. Fundamental perceptions of self, in particular, will therefore have a very great degree of stability according to perceptual theory. The identical character of perceptual factors from different source materials found in this research lends support to that theoretical position.

Communality Weights as Indicators of Reliability

In Table 2 two sets of communality figures may be observed, one in the extreme right hand column and another across the bottom of the table. These figures are important indicators of the reliability of the perceptual inferences. The communality figure for a particular item represents the proportion or percent of the total variance of that item which can be attributed to the eight factors which have been identified. The total variance for any item can be attributed to three sources: 1. the variance accounted for by the identified factors, 2. the variance that might be accounted for by specific factors not determined in the factor analysis and, or 3. the error or chance variation. It follows that the communality figures obtained for this data can be used as a measure of the reliability of inferences. For instance, the communality for Item 1 in Table 2 is .91. This means that 91 percent of the total variance for Item 1 can be directly attributed to the eight factors identified in the analysis. This leaves 9 percent of the total variance of this item to be attributed to unknown specific factors and, or, chance error. In other words, it can be said that the reliability of Item 1 in this analysis is at least .91 and that the maximum error or chance variance amounts to only 9 percent of the total variance. An examination of the communalities of the 39 items in Table 2 shows only six items with communalities of less than .70 and indicates a high level of reliability for the scales used in this research.

Similarly the communality figures in the bottom row of Table 2 demonstrate an acceptable degree of reliability for this data. An examination of these communality figures reveals that the eight factors of this analysis have accounted for 74 percent of the total variance of the 39 items in the scale.

The Perceptual Factors

A factor loading of 40 was established by the research staff and consultants as the threshold criterion for significance in a given factor. Two of the factors in the kindergarten year were eliminated because they did not meet this situation. This left a very large Factor I and five other factors (Factors II, III, IV, V, VI) (See Table 2). These same factors appear in the PC and PT data factor analyses (Appendices D and E).

Factor I--The General Adequacy Factor

Table 3 presents the data for Perceptual Factor I. This is an all-inclusive factor including every item on the Perceptual Score Sheet with the exception of "enough in music" and "enough in art." This factor alone accounts for 67 percent of the total variance of the 39 items. Its strength and pervasiveness is further emphasized by the fact that the next strongest factor (II) accounts for only 9 percent of the total variance. Factor I, by itself, accounts for more of the total variance than the sum of all other identifiable factors in the analysis. A finding of such strength and pervasiveness is most unusual in research experience with factor analyses of personality and behavior scales.

Combs and Snygg, in Individual Behavior (1959), have taken the position that all human needs may be reduced to one, a basic need for adequacy. Other authors, writing in the phenomenological

TABLE 3

Perceptual Data Factor I
General Adequacy
Kindergarten Study

Item No.	Name	PC Factor Loading
1.	Adequate--Inadequate	93
5.	Worthy, lovable--Unworthy	89
6.	Important--Unimportant to Children	87
39.	School is a happy place	87
18.	Adequate to cope in School	86
2.	Able--Unable	86
9.	Identified with--Alienated	84
11.	Liked by--Not liked--Adults	84
28.	Others friendly	84
8.	Able to cope with Children	83
7.	Liked by--Not liked by--Children	82
12.	Able to cope with Adults	82
13.	Satisfactory to--Not Sat.--Adults	80
27.	Others Satisfactory--Not Satisfactory	80
29.	Adults friendly	80
4.	Attractive--Unattractive	78
38.	School is helpful	76
10.	Important--Unimportant--Adults	71
16.	Able to cope with Teacher	71
35.	Teachers interested--Not	70
17.	Satisfactory to Teacher	68
24.	Enough oral expression	66
31.	Adults interested	66
32.	Adults predictable	65
37.	School is challenging	63
21.	Enough numbers	63
14.	Important to Teacher	63
30.	Adults helpful	62
19.	Enough reading	61
33.	Teachers friendly	60
36.	Teachers predictable	58
3.	Strong--Weak	57
20.	Enough writing	53
15.	Liked by Teacher	51
34.	Teachers helpful	46
25.	Enough athletics	45
26.	Enough games, etc.	43
	Communality	19.4

frame of reference have not taken such an inclusive position but, nevertheless, are agreed upon the very central character of the individual's need to feel able to cope with his world. Kelley (ASCD, 1962), for example, has referred to the individual's need to feel he is "enough." The overwhelming character of Perceptual Factor I in these research findings seems to lend support to the basic character of the individual's feeling of adequacy in the dynamics of human personality.

It is interesting that no factor having to do with the child's relationship to other children appeared among the kindergarten perceptual factors. However, an examination of Table 3 shows a number of items having to do with children have high factor loadings for the General Adequacy Factor I. Indeed, the lowest rating of an item having to do with a child's feelings about other children has a factor loading of 80 in that list. This suggests the possibility that the child's conception of his relationship with other children is so closely related to General Adequacy that it does not appear as a separate factor after General Adequacy has been removed from the matrix.

Perceptual Factor II--Acceptable to Teachers

Table 4 presents factor loadings for Perceptual Factor II. Perceptual Factor II is a much smaller factor having a communality index of only 2.5. It is responsible for 8.7 percent of the total variability in the factor analysis and seems to refer to the child's perceptions of self in relation to his teachers. The child's feeling about his acceptability to his teachers seems to play a significant part in his perceptual organization in the kindergarten year.

TABLE 4

Perceptual Factor II--Acceptable to Teachers
Kindergarten Study

Item No.	Name	Factor Loading
34	Teachers helpful	72
15	Liked by Teacher	69
33	Teachers friendly	52
36	Teachers predictable	51
17	Satisfactory to Teacher	48
	Communality	2.5

Perceptual Factor III--Adequate to the Curriculum

Table 5 presents factor loadings for Perceptual Factor III.

TABLE 5

Perceptual Factor III--Adequate to the Curriculum
Kindergarten Study

Item No.	Name	Factor Loading
20	Enough writing	65
19	Enough reading	59
21	Enough numbers	55
26	Enough games, etc.	50
23	Enough art	41
	Communality	1.9

All items in this factor have to do with the child's feeling about whether or not he is "enough" in various aspects of the curriculum. It accounts for 6.5 percent of the total factor variability. At first glance it might appear that the item Enough in games is not consistent with the other items in the factor. However, this item was scored by observers primarily with respect to various forms of seat work, puzzles and the like--activities which represent important aspects of the curriculum in the kindergarten year. It is interesting that the curricular item _Enough in oral expression_ does not appear in this factor. This may be due to the fact that the kindergarten experience lays much less stress on verbal activities than later years.

Perceptual Factor IV--Strong Enough

The data for Factor IV are presented in Table 6.

TABLE 6

Perceptual Factor IV--Strong Enough
Kindergarten Study

Item No.	Name	Factor Loading
25	Enough athletics	61
3	Strong	54
	Communality	1.2

Only two closely associated items make up Perceptual Factor IV. These have to do with strength and athletics. The communality index for this factor indicates that it accounts for 4.1 percent of the variation. The world of the kindergarten child is one where one's physical strength and prowess are important for getting along. It is not surprising, therefore, that this factor should appear as a separate factor.

Perceptual Factor V--Important to Adults

Table 7 presents the data for Perceptual Factor V. All three items in this factor have to do with the child's relationship with adults. The communality index for this factor indicates that it accounts for 4.8 percent of the variability. The perceptual item, Liked by Adults achieves a loading in this factor of only 14. Does this mean that feeling Important to Adults is of greater significance in the child's economy than being liked? The literature of child psychology often stresses the importance of liking the child. These findings suggest that recognition and interest are of even greater import from the child's own view.

TABLE 7

Perceptual Factor V--Important to Adults
Kindergarten Study

Item No.	Name	PC Factor Loading
10	Important to Adults	54
31	Adults interested	54
30	Adults helpful	40
	Communality	1.4

Perceptual Factor VI--Important to Teachers

The single item comprising this factor is shown in Table 8.

TABLE 8

Perceptual Factor VI--Important to Teachers
Kindergarten Study

Item No.	Name	PC Factor Loading
14	Important to Teacher	.53
	Communality	1.0

The communality index for Perceptual Factor VI indicates that it accounts for only 3.5 percent of the variation. This factor appears separate from Factor II which is also concerned with the child's relations with his teachers. Apparently a child may feel important to his teachers without necessarily feeling liked or satisfactory to them or perceiving them as friendly, helpful, or predictable. It may be that creative, nonconforming or behavior problem children in the kindergarten group accounted for the appearance of this item as a separate factor. It is conceivable that such children might regard themselves as important to their teachers even though their relationships with their teachers were not very satisfactory or pleasant.

Summary of Kindergarten Factor Analysis of Perceptual Data

For the children of this study, then, in the kindergarten year, six significant perceptual factors appear. They are:

I. General adequacy

II. Acceptable to teachers

III. Adequate to the curriculum

IV. Strong enough

V. Important to adults

VI. Important to teachers

Within the limits of the items included in this study, these six factors provide an indication of the perceptions of self and the world of major concern to this group of kindergarten children.

THE BEHAVIORAL DATA--KINDERGARTEN YEAR

The Behavioral Data obtained from each of the kindergarten teachers was subjected to factor analysis as indicated in Chapter II. The results of this analysis are shown in Table 9. An

TABLE 9

Loadings on Six Factors from the Behavioral Data for Teachers I & II--Kindergarten Study

Teacher I Factors						Items	Teacher II Factors					
A	B	C	D	E	F		A	B	C	G	H	I
87	02	36	05	-03	19	(1) Secure-Insecure	80	15	33	23	-17	25
66	12	39	28	-16	02	(2) Independent-Dependent	52	15	08	52	-34	12
74	06	48	-08	10	01	(3) Emotionally Stable-Unstable	75	08	48	17	-04	16
81	21	15	-04	08	06	(4) Spontaneous-Rigid Flexible-Defensive	64	21	52	12	-14	22
20	08	-65	34	25	15	(5) Aggressive-Retiring	64	09	-52	-02	06	19
74	-00	-15	17	-12	-29	(6) Energetic-Apathetic	82	11	-25	-05	00	01
78	19	05	-04	-04	-37	(7) Attractive-Unattractive	57	-06	-07	-19	03	-51
74	-02	01	20	38	-05	(8) Outgoing-Withdrawing	60	57	-15	-28	-26	06
37	-30	72	11	21	15	(9) Cooperative-Uncooperative	-01	10	81	20	08	-00
39	-09	76	-03	07	-01	(10) Dependable-Undependable	32	03	86	14	01	-02
55	11	08	69	06	11	(11) Leadership (high-low)	89	16	-04	06	21	-02
74	01	07	-10	45	16	(12) Cheerful-Sad Happy-Sullen	72	-07	11	-06	-08	-07
29	80	-19	15	07	06	(13) Creativity (high-low)	14	80	15	-06	-13	-02
59	-20	67	-08	01	07	(14) Hostility (low-high)	-16	26	71	-15	-13	12
15	34	55	58	07	-30	(15) Attention Span (long-short)	-02	75	18	-08	28	-03
16	-31	08	53	02	07	(16) Acceptable to boys (high-low)	83	-10	-06	-10	23	-15
24	46	47	07	27	-14	(17) Acceptable to girls (high-low)	56	12	41	-10	31	-12
29	29	70	-12	17	-22	(18) Acceptable to high status peers	79	10	15	06	27	-17
48	52	16	-03	16	-01	(19) Coordination of small muscles	-01	79	13	38	-02	-09
43	09	-03	08	-13	-55	(20) Coordination of large muscles	74	-18	-09	29	-20	-09
23	16	34	45	35	-26	(21) Reading	27	61	14	26	40	-08
06	37	44	32	40	-12	(22) Numbers	-05	64	-11	20	01	-21
01	25	11	03	77	04	(23) Music	11	55	-26	29	03	46
-04	-07	62	04	-15	40	(24) Self-care	40	27	36	61	-09	-04
57	15	11	23	68	-08	(25) Oral expression	41	61	-12	-39	-08	18
07	37	29	36	28	14	(26) Written expression	28	26	26	00	18	09
28	82	-16	16	-01	07	(27) Art	-07	75	38	06	-27	16
16	76	23	-06	14	09	(28) Handwriting	-17	46	09	69	17	-00
36	30	77	22	-22	01	(29) Work habits	26	67	43	04	-07	-05

Note: Underlined items have a loading of 40 or more, criterion for acceptability.

examination of this table reveals three easily recognizable, large, overlapping factors for the two teachers. In addition, several individual factors appear for each teacher.

Reliability of Teacher Ratings of Behavioral Data

The statistical analysis of the behavioral data in the kindergarten year provides two indications of the probable reliability of the teacher ratings obtained in this phase of the research:

1. The mean ratings on all items made by the two teachers was identical, 2.5. This would indicate that the general level of their ratings was similar.

2. The existence of three highly similar, overlapping factors suggests that both teachers are rating the same things and in similar fashion. Since factor analyses are made from correlation matrices and sizeable correlations are dependent upon reliable data, the existence of common factors for these teachers indicates a basic reliability in their behavior ratings. The fact that these three factors also show a high degree of stability through the first and second grades in the ratings of other teachers adds further weight to the probability of reliable ratings for these teachers.

Two interpretations may be placed upon the emergence of the individual factors appearing for the two teachers. a. They may be a consequence of less reliable aspects of the teachers' ratings or b. They may represent true individual differences in the teachers. The authors of this research are inclined to lean to the second explanation. Since it is not possible to determine from this data which of the two conditions exists, however, this research report has called attention to the presence of individual factors but has not used them in further analysis.

Behavior Factor A--The Fully-Functioning Child

The factor loadings for Teachers I and II for Behavior Factor A are presented in Table 10.

TABLE 10

Behavior Factor A--The Fully-Functioning Child
Kindergarten Study

Item No. & Name		Teacher I	Teacher II
*11.	Leadership (high-low)	55	89
6.	Energetic-Apathetic	74	82
1.	Secure-Insecure	87	80
3.	Emotionally Stable-Unstable	74	75
20.	Coordination of large muscles (good-poor)	43	74
12.	Cheerful-Sad Happy-Sullen	74	72
4.	Spontaneous-Rigid Flexible-Defensive	81	64
8.	Outgoing-Withdrawing	74	60
7.	Attractive-Unattractive	78	57
2.	Independent-Dependent	66	52
25.	Oral expression	57	41
**16.	Acceptable to boys (high-low)		83
18.	Acceptable to high status peers (high-low)		79
5.	Aggressive-Retiring		64
17.	Acceptable to girls (high-low)		56
24.	Self-care		40
14.	Hostility (low-high)	59	
19.	Coordination of small muscles (good-poor)	48	

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*Only those items achieving a loading of 40 for both teachers are accepted as determining Behavior Factor A.

**Items achieving a loading of 40 for one teacher only are shown above as matters of interest.

It will be observed that the two kindergarten teachers are remarkably close with respect to Behavior Factor A. Their ratings appear to select the active, outgoing, confident, capable child. They seem to be responding to the highly adequate, supremely healthy "all boy" or "all girl."

Behavior Factor B--The Good Student

Factor loadings for Behavior Factor B appear in Table 11.

TABLE 11

Behavior Factor B--The Good Student
Kindergarten Study

Item No. & Name		Teacher I	Teacher II
*13.	Creativity (high-low)	80	80
19.	Coordination of small muscles (good-poor)	52	79
27.	Art	82	75
28.	Handwriting	76	46
**15.	Attention Span (long-short)		75
29.	Work Habits		67
22.	Numbers		64
21.	Reading		61
25.	Oral Expression		61
8.	Outgoing-Withdrawing		57
23.	Music		55
17.	Acceptable to girls (high-low)	46	

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*Only those items achieving a loading of 40 for both teachers are accepted as determining Behavior Factor B.
**Items achieving a loading of 40 for one teacher only are shown above as matters of interest.

The teachers seem to be responding to the child who is creative and skilled in school work. For kindergarten children this is primarily a matter of "seat work" activities rather than the traditional "subjects" which make up the curriculum in later years. They are the aspects of kindergarten experiences which become "studying" in higher grades. This factor has, therefore, been given the name, The Good Student.

From an examination of Table 11, it would appear that Teacher II is more specifically concerned with the child's scholastic skills than Teacher I. Actually, this is not true but seems to be an artifact of the factor analysis. In addition to the three factors held in common by these teachers, each had three individual factors not significantly shared by the other. An examination of the individual factors found for Teacher I reveals the items, attention span, numbers, reading, oral expression and music included in other factors even though those items miss significant loading in Factor B. It seems apparent that both teachers are concerned about their students' scholastic achievement albeit with differing emphases.

Behavior Factor C--The Good Child

Factor loadings for Behavior Factor C are shown in Table 12. The kindergarten teachers in this factor seem to be responding to the quiet, cooperative, well-behaved youngster. It has been given the name, The Good Child.

All of the Behavior Factors discussed above appeared for both kindergarten teachers. In addition, three factors appeared in the ratings of Teacher I but not Teacher II, while three other factors appeared in the ratings of Teacher II not shared by her counterpart. These individual behavior factors were as follows:

Additional Factors for Teacher I

D. Leadership, attention span, acceptability to boys, reading

E. Cheerful, numbers, music, oral expression

F. Large muscle coordination, self-care.

Additional Factors for Teacher II

G. Independent, handwriting, self-care

H. Reading

I. Music, withdrawing.

TABLE 12

Behavior Factor C--The Good Child
Kindergarten Study

Item No. & Name	Teacher I	Teacher II
*10. Dependable-Undependable	75	86
9. Cooperative-Uncooperative	72	81
14. Hostility (high-low)	67	71
5. Aggressive-Retiring	-65	-52
3. Emotionally Stable-Unstable	48	48
29. Work Habits	77	43
17. Acceptable to girls (high-low)	47	41
** 4. Spontaneous-Rigid Flexible-Defensive		52
18. Acceptable to High Status Peers (high-low)	69	
24. Self-care	62	
22. Numbers	44	

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*Only those items achieving a loading of 40 for both teachers are accepted as determining Behavioral Factor C.

**Items achieving a loading of 40 for one teacher only are shown above as matters of interest.

The factors appearing for individual teachers in this research have not been extensively analyzed. However, they do occur. What is more, the particular factors appearing for a particular teacher seem highly indicative of the teacher's value system. The individual factors appearing for teachers in this study, for example, were quite consistent with the teachers' personalities as the staff came to know them. Indeed, the relationship is so close as to suggest that factor analyses of teachers' ratings of children might well be used as important devices for the study of the teacher's own personality and value structure.

Summary of Kindergarten Factor Analyses of Behavioral Data

It appears from these factor constellations that the kindergarten teachers are responding in very clear measure to three types of children:

1. The fully-functioning, healthy, outgoing, active child.
2. The child who is a good student, who responds well to the curriculum and school operations.
3. The "good" child who is passive, dependable and cooperative.

In interpreting these factor analyses results it is important to keep in mind that these indicate constellations to which these teachers are responding. The mere existence of these factors, however, does not imply that they are equally valued by the teachers. To this point it can be said only that these teachers are both responding to these three types of children.

INTERRELATIONSHIPS OF PERCEPTUAL AND BEHAVIOR FACTORS IN THE KINDERGARTEN YEAR

To determine the interrelationships of behavioral and perceptual factors in the kindergarten year, Pearson product-moment correlations were obtained for these two classes of data for each teacher. The intercorrelations for Teacher I are shown in Table 13.

TABLE 13

Intercorrelations of Perceptual Factors With Behavior Factors
Kindergarten Study--Teacher I

Behavior Factors	Perceptual Factors					
	PI Gen. Adq.	PII Accept. to Tchr.	PIII Adq. to Curric.	PIV Strong Enough	PV Imp. to Adults	PVI Imp. to Tchr.
BA Fully-Functioning Child	.21	.17	-.04	.11	.03	.13
BB Good Student	.04	.12	.39	-.33	.13	-.05
BC Good Child	.27	.22	.39	-.14	.04	-.20

Note: Underlined correlations are significant at the 5 percent level or better.

It will be seen from Table 13 that only two correlations reach the 5 percent level of confidence for Teacher I. These indicate that the child's feeling of being adequate to the curriculum is correlated with his teacher's judgment of him as a good student and as a good child. Is this because the teacher's judgment of the child in these respects gets through to him resulting in a feeling of adequacy in his school work? Or, is the teacher's judgment a consequence of the child's success with the curriculum?

While not reaching a magnitude at the 5 percent level, two negative correlations seem worthy of note, namely, the two correlations of the child's perception of himself as strong enough with his teacher's ratings of him as a student and as a "good" child. Apparently, the child who feels physically adequate is less likely to be the good student in this teacher's class. Does the "academically inept athlete" stereotype begin so young? Or is this item heavily weighted by some behavior problem children?

Interrelationships of perceptual and behavior factors for the children in Teacher II's class are shown in Table 14.

TABLE 14

Intercorrelations of Perceptual Factors with
Behavior Factors
Kindergarten Study--Teacher II

Behavioral Factors	Perceptual Factors					
	PI Gen. Adq.	PII Accept. to Tchr.	PIII Adq. to Curric.	PIV Strong Enough	PV Imp. to Adults	PVI Imp. to Tchr.
BA Fully-Functioning Child	.40	.07	.38	.48	.03	.29
BB Good Student	.33	.34	.69	.46	.11	.28
BC Good Child	.37	.27	.52	.11	.32	.16

Note: Underlined correlations are significant at the 5 percent level or better.

It will be seen that seven intercorrelations in this table exceed the 5 percent criterion. For Teacher II, the child's feeling of adequacy to deal with the curriculum is closely related to the teacher's judgment of the child as a good student and a good child but also to her rating of the child as fully functioning. The child's feeling of being strong enough is notably related to the teacher's judgment of him as fully functioning and as a good student but not to the teacher's judgment of him as a good child. Since the good child behavior category might also be described as the well-behaved child, this finding seems to be quite consistent with expectancy. The child's feelings of general adequacy for Teacher II are also related to the judgment of the teacher as to his being fully functioning and a good child.

The child's feeling of being strong enough is notably related to the teacher's judgment of him as fully functioning and as a good student. In this teacher's classroom, the child's general feeling of adequacy also shows a relationship to his teacher's ratings of him as a fully-functioning child and as a good child. There are no negative correlations for Teacher II.

SIGNIFICANT OBSERVATIONS ON THE RELATIONSHIP OF CHILDREN'S PERCEPTIONS AND BEHAVIOR IN THE KINDERGARTEN YEAR

The first question asked in this research was "What are the relationships between children's perceptions and their behavior?" From the results reported above, two general and six more specific observations seem pertinent.

1. The relationship of children's perceptions and their behavior as seen by their teachers in the kindergarten year is

generally positive but by no means identical. The differences found here have added significance when it is recalled that these are highly competent laboratory school teachers, probably more sensitive than average. It is apparent that there are very real differences between the ways these children see themselves and their world and the ways in which they are seen by their teachers. Children perceiving themselves in similar ways may behave quite differently and children behaving in similar fashion may be perceiving quite differently. A child regarded as "good" by his teachers may be good for very different personal reasons. On the other hand, a child who feels highly adequate may or may not behave in ways approved by his teachers.

2. *There are variations from teacher to teacher in the degree of overlap of child perceptions and behavior*. Although the teachers in this research are in close agreement with respect to three major behavior factors, the number of significant correlations between perceptual factors and behavioral factors for the two teachers varies considerably. Out of ~~21~~ 18 possible correlations only two achieve significance for both teachers, while five more achieve a significance level in the case of one teacher only. It appears that the degree of overlap between the child's world and the teachers' conceptions of him is strongly influenced by the particular teachers with whom he works. While these teachers show three common behavioral factors, each also possesses three highly individual factors indicating important differences in attitudes and values. It seems likely that these

differences are responsible for the variations observed in the degree of overlap of teacher and child perceptions and emphasizes the importance of teacher values as an important dynamic in the educational process.

For easy reference in the remainder of this section the specific items in the three Behavioral Factors under discussion are repeated here:

Behavior Factor A

The Fully-Functioning Child

Leadership
Energetic
Secure
Emotionally stable
Coordination of large muscles
Cheerful
Spontaneous
Outgoing
Attractive
Independent
Oral expression

Behavior Factor B

The Good Student

Creativity
Coordination of small muscles
Art
Handwriting

Behavior Factor C

The Good Child

Dependability
Cooperativeness
Low hostility
Retiring
Emotionally stable
Good work habits
Acceptable to girls

3. The child's general feeling of adequacy shows a significant relationship with teacher ratings of the fully-functioning child and the good child for one teacher.

For Teacher II the child's general feeling of adequacy correlates positively with his behavior as a healthy, stable, outgoing, independent person and with such behavioral characteristics as dependability, cooperativeness, good work habits and low hostility. Although there is some indication of a similar relationship for Teacher I, the correlations do not reach the 5 percent level of confidence. These differences underline the observations in the paragraph above concerning the effects of differing teacher values. There is a suggestion in these findings that Teacher I may be more scholastically, intellectually oriented, while Teacher II would seem to be more personality oriented.

In neither class does the child's feeling of general adequacy show a significant relationship to his performance as a student. This suggests that, at least in the kindergarten year, the child's feeling of adequacy is a function of other events than scholastic success.

4. The child's feeling of acceptability to his teachers is not significantly related to the teachers' ratings on any of the three behavioral factors. The importance of accepting a child, irrespective of his behavior, has often been stressed in teacher-education but the question is sometimes raised whether this is possible in practice. It would appear that these teachers have been successful in achieving that condition.

5. For both groups of children, the child's feeling of adequacy to the curriculum was significantly related to the teacher's judgment of him as a good student and good child. Apparently, feeling of success in the curriculum is associated for these children with the passive, conforming behavior of the good child factor. For only one of these teachers is this perceptual factor associated with the more active, outgoing, fully-functioning category.

6. The most striking difference in the two kindergarten

classes appears with respect to the perceptual factor "strong enough." In Teacher II's class the child's feeling of being strong enough is positively related to Behavior Factors A and B and slightly to Behavior Factor C. In the case of Teacher I, however, the child's feeling of being strong enough has only a low relationship to Factor A and negative relationships to Behavior Factors B and C. These results would suggest the presence of quite different attitudes in the two teachers with respect to the strong, athletic child.

7. The child's feeling of being important to adults in the kindergarten year is not significantly related to any aspect of his school behavior.

8. The perceptual factor, important to teachers, does not achieve a significant intercorrelation with any behavioral factor in either kindergarten group. This may be due to the unconditional "caring" these teachers are capable of feeling for their pupils. Or, it may mean that the child's feeling of importance to his teachers is not necessarily a function of her approval of him.

THE RELATIONSHIP OF PERCEPTUAL FACTORS TO VITAL STATISTICS

The intercorrelations of perceptual factors with vital statistics for children in Teacher I's class are shown in Table 15. It is apparent from the intercorrelations of perceptual factors with vital statistics for this group that four items reach the criterion of note. Heavier children in this class seem to have less feelings of being strong enough or of being important to the teacher. One would normally expect the heavier, more robust child to feel stronger but this does not appear to be the case in this group and the writers are at a loss to offer an explanation. The negative relationship of weight to the Important to Teacher category is also difficult to account for.

TABLE 15

Intercorrelations of Perceptual Factors with
Vital Statistics
Kindergarten Study--Teacher I

Vital Statistics	Perceptual Factors					
	PI	PII	PIII	PIV	PV	PVI
	Gen. Adq.	Accept. to Tchr.	Adq. to Curric.	Strong Enough	Imp. to Adults	Imp. to Tchr.
Chronological Age	-.25	.07	-.02	-.13	-.11	-.31
Weight	-.20	.08	.10	-.47	-.20	-.36
Height	.17	.16	-.02	-.27	-.30	-.31
Absences	.02	.01	-.08	-.04	-.22	.06
Sex*	-.23	-.47	-.34	.11	-.47	-.00

Note: Underlined correlations are significant at the 5 percent level or better.
* Negative signs indicate female; positive, male.

The two negative correlations achieving significance in the sex category seem to suggest that the feeling of being acceptable to teachers and important to adults is more likely to occur with girls than with boys for this group of children.

Intercorrelations of perceptual factors with the vital statistics for children in Teacher II's class are shown in Table 16.

TABLE 16

Intercorrelations of Perceptual Factors with Vital Statistics Kindergarten Study--Teacher II

Vital Statistics	PI Gen. Adq.	PII Accept. to Tchr.	PIII Adq. to Curric.	PIV Strong Enough	PV Imp. to Adults	PVI Imp. to Tchr.
Chronological Age	-.30	.07	.04	-.14	-.12	-.18
Weight	.05	.08	-.01	.12	-.02	-.04
Height	.09	.12	.22	.31	.08	.00
Absences	.16	-.10	-.06	.14	-.04	.01
Sex*	-.02	-.18	-.40	-.08	-.13	.14

Note: Underlined correlations are significant at the 5 percent level or better.
* Negative signs indicate female.

Examination of Table 16 reveals that only one intercorrelation achieves a level of note, namely, the correlation of sex with adequate to curriculum. Apparently girls in this group feel more adequate with respect to the curriculum than do boys. This finding is quite consistent with usual experience with boys and girls in the early school years.

The same relationship of chronological age to Perceptual Factor I noted in the case of Teacher I seems also to exist in the case of Teacher II. However, the relationship between children's weight and perceptual factors seems considerably less for Teacher II than was the case for Teacher I. Perhaps this is due to the peculiar make-up of the class.

CHAPTER IV

PERCEPTION AND BEHAVIOR IN THE FIRST GRADE

Between the kindergarten and first grade years of the study eight subjects were lost as a consequence of being retained in the kindergarten, moving from the city or for other reasons. The number and sex distribution of those remaining in the study are indicated in Table 17.

TABLE 17

Population--First Grade Study

Teacher III			Teacher IV		
Boys	Girls	Total	Boys	Girls	Total
16	13	29	15	9	24

PERCEPTUAL RESULTS--FIRST GRADE

Results of the factor analysis of the first grade perceptual data are shown in Table 18. It will be observed from this table that the perceptual data in the first grade yielded eight major factors, five of which showed high degrees of overlap with those existing in the kindergarten year. An examination of Table 18 indicates that, as in the kindergarten year, one large overall factor, I General Adequacy, appears accounting for 72 percent of the total variance. The other four factors in common with the kindergarten year are:

II. Acceptable to teachers

III. Adequate to the curriculum

IV. Strong enough

VI. Important to teacher.

TABLE 18

Factor Loadings on Eight Perceptual Data Factors, First Grade Study

Variable No. & Name	I	II	III	IV	IX	VI	XI	XII	Communality
1. Adequate	91	-10	03	14	-03	-04	08	12	.87
2. Able	83	-09	16	24	-07	02	05	01	.79
3. Strong	47	01	-05	79	00	04	-06	-03	.86
4. Attractive	80	06	02	-02	-05	00	08	27	.73
5. Worthy, Lovable	85	08	-19	-06	-12	-19	13	-04	.84
6. Important with Children	77	-25	-16	22	27	03	05	-04	.81
7. Liked by Children	77	00	-04	23	37	00	-10	-00	.80
8. Able to cope with Children	79	-12	-13	22	17	00	10	-26	.81
9. Identified with Children	76	-20	-25	11	35	-15	-06	03	.84
10. Important to Adults	82	-06	-26	-10	-20	15	22	-00	.86
11. Liked by Adults	86	-02	-24	-16	03	-12	13	24	.91
12. Able to cope with Adults	84	-13	-02	-04	-20	-08	-26	05	.84
13. Satisfactory to Adults	89	06	-08	-13	-03	-07	-07	06	.84
14. Important to Teacher	59	13	-16	-18	01	50	04	06	.68
15. Liked by Teacher	72	39	07	-13	04	-01	07	-02	.70
16. Able to cope with Teacher	85	18	19	-10	-09	18	-08	-16	.87
17. Satisfactory to Teacher	77	29	17	-30	-06	-03	04	00	.80
18. Adequate to cope	90	-04	20	07	-01	09	-01	-04	.87
19. Enough reading	72	-10	55	-05	-20	-01	00	-00	.87
20. Enough writing	72	03	38	-13	-23	08	17	-09	.77
21. Enough numbers	64	14	53	09	01	-16	-02	-05	.75
22. Enough music	64	-20	22	00	02	00	02	-12	.51
23. Enough art	68	10	10	13	00	01	-02	39	.65
24. Oral expression	70	-24	20	23	-16	11	-26	10	.76
25. Enough athletics	45	-01	-12	77	04	-05	-08	-04	.82
26. Enough games	77	-24	13	16	-08	-19	-05	02	.74
27. Others satisfactory	70	-05	-10	38	26	-09	01	-25	.78
28. Others friendly	70	-06	-10	23	49	06	12	-02	.82
29. Adults friendly	83	04	-18	00	-03	-16	07	16	.78
30. Adults helpful	81	-00	-19	-28	-12	04	-10	02	.81
31. Adults interested	81	-18	-30	-04	-25	06	04	02	.85
32. Adults predictable	81	-12	07	-20	-05	03	-31	-04	.82
33. Teachers friendly	66	61	03	-12	01	01	03	05	.82
34. Teachers helpful	65	52	-04	-28	-16	12	-02	-06	.81
35. Teachers interested	76	23	-08	-14	-02	20	33	04	.81
36. Teachers predictable	72	-03	17	-23	05	14	17	-03	.66
37. School is challenging	72	04	17	01	-01	-15	-15	-29	.68
38. School is helpful	79	27	-02	-03	-02	-08	15	-17	.75
39. School is a happy place	81	-14	00	16	39	01	00	-05	.85
Communality	22.4	1.5	1.5	2.3	1.2	.63	.64	.66	30.8
Percent of Variance	72.7	4.9	4.9	7.5	3.9	2.0	2.1	2.1	79%

One factor appearing in the kindergarten year did not appear in the first grade analysis. This was Perceptual Factor V, Important to Adults.

Of the three new factors appearing in the first grade analysis, only one, IX Others Friendly, included factor loadings sufficient to meet the established criterion for serious consideration.

As in the kindergarten year the communality scores for items in the perceptual score sheet are uniformly high. Only five items achieve a communality score below 70 and only one below 65. In addition, communality indices show total variance represented by the eight factors of 79 percent. A very considerable proportion of the total variance is thus represented in the perceptual factors obtained in this portion of the research.

Perceptual Factor I--General Adequacy

Factor loadings for Perceptual Factor I are presented in Table 19.

In the first grade, Perceptual Factor I includes every item in the Perceptual Score Sheet. It is very similar with Factor I of the kindergarten year except that two items, art and music, which did not appear in the kindergarten year as a part of Factor I are included in the first grade. As in the kindergarten year, the child's overall feeling of adequacy seems to pervade every aspect of his experience and represents a global feeling about self. Again, as in the kindergarten results, the all-pervasive character of the general adequacy factor found here seems to lend support to the basic nature of adequacy as a

TABLE 19

Perceptual Factor I--General Adequacy
First Grade Study

Item No.	Name	Factor Loading
1.	Adequate	91
18.	Adequate to cope in school	90
13.	Satisfactory to (adults)	89
11.	Liked by (adults)	86
5.	Worthy, lovable	85
16.	Able to cope with teacher	85
12.	Able to cope with adults	84
2.	Able--Unable	83
29.	Adults friendly	83
10.	Important (adults)	82
30.	Adults helpful	81
31.	Adults interested	81
32.	Adults predictable	81
39.	School is a happy place	81
4.	Attractive	80
8.	Able to cope with children	79
38.	School is helpful	79
6.	Important to children	77
7.	Liked by children	77
17.	Satisfactory to teacher	77
26.	Enough games	77
9.	Identified with	76
35.	Teachers interested	76
15.	Liked by teacher	72
19.	Enough reading	72
20.	Enough writing	72
36.	Teachers predictable	72
37.	School is challenging	72
24.	Enough oral expression	70
27.	Others satisfactory	70
28.	Others friendly	70
23.	Enough art	68
33.	Teachers friendly	66
34.	Teachers helpful	65
21.	Enough numbers	64
22.	Enough music	64
14.	Important to teacher	59
3.	Strong	47
25.	Enough athletics	45
	Communality	22.4

human need postulated by perceptual-phenomenological theorists.

In comparing Factor I in the first grade with the kindergarten year one interesting observation can be made. That is, items referring to the child's relationship to adults which were quite equally spread throughout the rank order description in the kindergarten year became clustered near the top in the first grade results. In the kindergarten year only one item with respect to adults achieved placement in the first 12 ranks. In the first grade year every item on the Perception Score Sheet referring to adults has moved up into the first 12 items of Perceptual Factor I. This seems to suggest that the child's perceptions of his relationships with adults in the first grade year play a more significant part in his basic feelings of adequacy.

Perceptual Factor II--Acceptable to Teachers

Factor loadings for Perceptual Factor II are shown in Table 20.

TABLE 20

Perceptual Factor II--Acceptable to Teachers
First Grade Study

Item No.	Name	Factor Loading
33.	Teachers Friendly	61
34.	Teachers Helpful	52
	Communality	1.5

Factor II has to do with the child's feeling that his teachers are friendly and helpful. This is similar to the kindergarten year in which these items also appeared in Factor II. However, during the kindergarten year three other items were also present in this factor but have disappeared from the first grade results. Those items are: liked by teacher, satisfactory to teacher and teachers predictable. It could even be argued that the elimination of these items has changed the very character of this factor. In the kindergarten year the factor seemed to be concerned with the child's feeling about his acceptability to the teacher, that is, his feeling about *self* in relation to his teachers. In the first grade the two items remaining are concerned with perceptions of the *teacher* rather than of the self.

Several hypotheses for the change in Perceptual Factor II suggest themselves. 1. Increasing concern on the part of the teachers with the child's academic success imposes demands on the child to meet prescribed levels of performance. This may cause children to feel that while teachers continue to be friendly and helpful, it is more difficult to be liked or satisfactory to them. 2. Another possibility may be--with increasing concern for his relationships with his peers (as indicated by the appearance of Factor IX - Others Friendly) in the first grade, being liked and satisfactory to teachers becomes a matter of less importance to children while relationships with peers and other adults increase in importance. 3. The disappearance of items relating to teachers from this factor may be due to the child's adjustment to school and so represents a greater certainty about his teachers than was true in kindergarten

Perceptual Factor III--Adequate to the Curriculum

The data for Perceptual Factor III are presented in Table 21.

TABLE 21

Perceptual Factor III--Adequate to the Curriculum
First Grade Study

Item No.	Name	Factor Loading
19.	Enough Reading	55
21.	Enough Numbers	53
	Communality	1.5

Factor III in the first grade year consists of the two items, Enough in Reading and Enough in Numbers. In the kindergarten year this factor also included Enough in Writing, Art and Games. The fact that writing, art and games does not appear in the first grade year may simply be an indication of the increasing specialization of the curriculum in the first grade. Reading and numbers are but a small part of the kindergarten curriculum while writing, art and games are very important aspects in the kindergarten. The reverse is true in the first grade when reading and numbers become primary.

Perceptual Factor IV--Strong Enough

The factor loadings for Perceptual Factor IV are presented in Table 22.

TABLE 22

Perceptual Factor IV--Strong Enough
First Grade Study

Item No.	Name	Factor Loading
3.	Strong	79
25.	Enough Athletics	77
	Communality	2.3

Factor IV, Strong Enough, which appeared as an important factor in the kindergarten year remains an important factor in the first grade with no additions or deletions.

Perceptual Factor VI--Important to Teacher

The data for this factor appears in Table 23.

TABLE 23

Perceptual Factor VI--Important to Teachers
First Grade Study

Item No.	Name	PC Factor Loading
14.	Important to Teacher	50
	Communality	.63

Factor VI, Important to Teacher, appears again as a significant factor in first grade although with a somewhat lighter factor loading and communality than in the kindergarten year. This is consistent with previous observations (Factor II) that relationships with teachers seem to be less important in the child's perceptual economy in first grade.

Perceptual Factor IX--Others Friendly

The factor loading for Perceptual Factor IX is shown in Table 24.

TABLE 24

Perceptual Factor IX--Others Friendly
First Grade Study

Item No.	Name	Factor Loading
28.	Others Friendly	49
	Communality	1.2

Factor IX, Others Friendly, is a new factor in the first grade year. This is an interesting addition. In both the kindergarten and first grade years Factor I included a heavy loading with respect to the child's perception of his relationships with his peers. An examination of Factor I in the kindergarten year indicates that many items expressive of this relationship appear high among the items making up Factor I. An examination of Factor I in the first grade year, however, indicates that loadings for relationships with peers seem to slide further down the scale giving way to increased loadings about adults. The appearance of Others Friendly as a separate Factor (IX) may explain, to some degree, this shift in Factor I.

Summary of First Grade Factor Analysis of Perceptual Data

Factor analysis of the perceptual data for the first grade produced one very large inclusive factor, I. General Adequacy, and five additional factors as follows:

II. Acceptable to teachers
III. Adequate to the curriculum
IV. Strong enough
VI. Important to teachers
IX. Others friendly.

Factor V, Important to Adults, which appeared in the kindergarten year disappeared from first grade results but items referring to relationships with adults assumed a more important position within the General Adequacy factor.

Factor IX, Others friendly, is a new factor appearing in the first grade results.

BEHAVIORAL RESULTS--FIRST GRADE

The Behavior Rating Sheets obtained from the first grade teachers were subjected to the same kind of analysis as that for the kindergarten phase of the study. The results of these factor analyses for Teachers III and IV are presented in Table 25.

Teacher III

An examination of Table 25 reveals in the case of Teacher III three large behavior factors practically identical with those found in the kindergarten year.

Behavior Factor A. The Fully-Functioning Child
" " B. The Good Student
" " C. The Good Child

Three additional individual factors also appear in this anslysis for Teacher III. They are, Behavior Factors J, K and M.

Teacher IV

Whereas the factor analysis of the behavioral data supplied by Teacher III was highly similar to that of Teachers I and II in the kindergarten year, the factor analyses for Teacher IV proved to be quite different from her colleagues. The factor pattern for this teacher was so erratic as to make quite clear that she was judging the behavior of children on quite different bases from the other teachers in the study. This difference was also demonstrated in a comparison of the average ratings for each teacher shown in Table 26.

TABLE 25

Loadings on Seven Factors from the Behavioral Data for Teachers III & IV--First Grade Study

Teacher III Factors								Teacher IV Factors					
A	B	C	J	K	L	H		A	B	C	N	K	O
83	15	29	25	16	-02	14	(1) Secure-Insecure	60	03	15	-05	-16	-08
73	49	26	06	04	-15	13	(2) Independent-Dependent	64	-03	-08	03	13	08
78	06	31	31	21	03	03	(3) Emotionally Stable-Un.	-12	-03	60	-03	02	31
91	11	-21	-18	-14	03	01	(4) Spontaneous-Rigid	02	04	-12	52	20	05
							Flexible-Defensive						
89	06	-20	-08	-18	21	01	(5) Aggressive-Retiring	-02	54	-10	-02	51	-18
72	03	00	56	-04	13	-13	(6) Energetic-Apathetic	-01	09	17	57	-25	08
01	04	21	-01	75	-04	24	(7) Attract.-Unattract.	-08	-02	30	-04	67	08
94	03	-17	-14	-07	15	01	(8) Outgoing-Withdrawing	73	-02	-07	-01	05	10
05	45	81	-03	29	13	03	(9) Cooperative-Uncoop.	19	-06	62	00	18	-07
10	46	76	-09	26	07	-02	(10) Dependable-Undepend.	-07	-09	24	-03	36	42
91	19	14	-01	03	-18	-06	(11) Leadership	00	07	13	67	-13	02
67	-03	11	12	33	28	-09	(12) Cheerful Sad	-03	68	17	02	-19	-03
							Happy-Sullen						
14	90	-06	-21	08	13	-16	(13) Creativity	02	-03	-15	40	22	08
-18	-21	64	-13	00	14	05	(14) Hostility	-03	42	23	-07	08	-07
04	85	30	-14	03	-26	04	(15) Attention Span	54	02	18	-01	02	-08
54	-03	52	-08	13	-16	-19	(16) Accept. to boys	14	04	45	00	22	-05
51	-06	34	09	64	-31	-07	(17) Accept. to girls	05	07	02	-08	07	20
50	11	48	-09	47	-37	04	(18) Accept. high status	02	01	-03	57	10	02
20	79	-09	39	-02	-12	03	(19) Coord. small muscles	01	28	-09	06	05	15
-22	72	-17	45	03	-07	18	(20) Coord. large muscles	00	03	07	15	-08	-03
20	59	11	-24	02	05	50	(21) Reading	-01	42	-04	-06	-05	22
50	52	32	-17	04	-15	-02	(22) Numbers	46	03	26	-01	10	-13
31	49	-37	-18	29	-03	-24	(23) Music	13	22	25	-08	22	38
14	17	24	01	81	08	-06	(24) Self-care	-03	-02	06	00	11	10
77	22	-09	-46	-04	02	10	(25) Oral expression	02	01	03	66	04	00
31	82	36	00	02	-01	09	(26) Written expression	05	15	-08	13	03	06
-04	83	-18	-03	09	01	-25	(27) Art	-01	13	06	-01	-04	-06
03	82	21	22	15	13	04	(28) Handwriting	02	43	-12	03	-01	16
06	64	62	11	16	00	-14	(29) Work habits	52	05	24	-04	14	-01

Items with a loading of 40 or more are underlined on the table.

TABLE 26

Average Ratings for Each Teacher
on The Behavior Rating Scale

Kindergarten	
Teacher I	2.5
Teacher II	2.5
First Grade	
Teacher III	2.5
Teacher IV	2.1

It may be observed from this table that Teachers I, II and III were rating children in a manner highly consistent with each other. Their ratings averaged slightly above the midpoint of the behavior rating scale and at an identical level in each case. Teacher IV, however, rated the children in her group considerably higher than her colleagues rated theirs.

Since the results for Teacher IV did not meet the research criteria for reliability, analysis of behavioral data from this teacher is not included in the report. The behavioral data reported below is for Teacher III only.

Behavior Factor A--The Fully-Functioning Child

Factor loadings for Behavior Factor A are shown in Table 27. Again in the first grade study Teacher III seems to be responding to the robust, active, secure, independent, outgoing youngster much as was true for the teachers in the kindergarten year. The high degree of comparability of the factors for this teacher with those of the kindergarten year in this and the following factors also indicates a very satisfactory reliability of ratings for the three teachers involved. They are apparently making ratings on highly similar bases.

TABLE 27

Behavior Factor A--The Fully-Functioning Child
First Grade Study--Teacher III

Item No. & Name	Present Kdgtn?	Teacher III
8. Outgoing	**	94
1. Secure	**	83
2. Independent	**	73
22. Numbers		50
11. Leadership	**	91
4. Spontaneous	**	91
5. Aggressive	*	89
3. Emotionally Stable	**	78
25. Oral Expression	**	77
6. Energetic	**	72
12. Cheerful	**	67
16. Accept. to Boys	*	64
18. Accept. to High Status Peers	*	50
17. Accept to Girls	*	51

Note: Asterisks in the column marked "present kindergarten?" indicates whether the item was present in the behavioral ratings for the kindergarten teachers. One asterisk indicates present for one teacher, two asterisks indicates present for both teachers.

Behavior Factor B--The Good Student

Data for this factor are presented in Table 28. Like the kindergarten teachers, this first grade teacher's ratings emphasize the child's behavior as a student. Several new items appear in the factor, however, like independent, dependable and cooperative, having to do with studious qualities or attitudes in addition to the skill items making major contributions to this factor in the kindergarten year.

TABLE 28

Behavior Factor B--The Good Student
First Grade Study--Teacher III

Item No. & Name	Present Kdgtn?	Teacher III
28. Handwriting	**	82
21. Reading	*	59
13. Creativity	**	90
15. Attention Span	*	85
27. Art	**	83
26. Written Expression		82
19. Coordination small muscles	**	79
20. Coordination large muscles		72
29. Work Habits	*	64
22. Numbers	*	52
2. Independent		49
23. Music	*	49
10. Dependable		46
9. Cooperative		45

Note: Asterisks in the column marked "present kindergarten?" indicates whether the item was present in the behavioral ratings for the kindergarten teachers. One asterisk indicates present for one teacher, two asterisks indicates present for both teachers.

Behavior Factor C--The Good Child

Factor analysis results for Behavior Factor C are shown in Table 29.

TABLE 29

Behavior Factor C--The Good Child
First Grade Study--Teacher III

Item No. & Name	Present Kdgtn?	Teacher III
9. Cooperative	**	81
16. Accept. to Boys		52
10. Dependable	**	76
14. Low Hostility	**	64
29. Work Habits	**	62
18. Accept. to High Status Peers	*	48

Note: Asterisks in the column marked "present kindergarten?" indicate whether the item was present in the behavioral ratings for the kindergarten teachers. One asterisk indicates the presence for one teacher, two asterisks indicates present for both teachers.

Factor C seems to describe the "good" child who behaves dependably, cooperates and operates with low hostility. Again, this factor agrees very much with the two teachers in the kindergarten year. The item, Acceptable to Boys, makes an appearance at a notable level in this first grade chart but did not in the kindergarten year.

Individual Factors for Teacher III

In addition to the three factors common to the kindergarten year, three additional individual factors appeared in the factor analysis of Teacher III's Behavioral Ratings. These were:

Factor K

Attractive, Self-Care, Acceptability to Girls, Acceptability to High Status Peers.

Factor J

Energetic, Poor Oral Expression, Coordination of Large Muscles

Factor H

Reading

Factor K seems to apply to the attractive, careful, highly acceptable child. Factor J seems to describe the athletic youngster, active and well coordinated, but not much for verbal things. Factor H is a single item, Reading. It also appeared as an individual item for Teacher II in the kindergarten year. Its appearance here is probably indicative of the overwhelming importance of this subject in the first grade.

Summary of First Grade Factor Analysis of Behavioral Data

In the first grade, behavioral data from one teacher proved too unreliable for use and was discarded. For the remaining teachers, three large behavioral factors appeared practically identical with those of the kindergarten year. They were as follows:

Behavior Factor A. The Fully-Functioning Child

Behavior Factor B. The Good Student

Behavior Factor C. The Good Child

In addition, three other factors appeared in the data for Teacher III. One of these, Reading, was identical with a similar item appearing in the kindergarten year for Teacher II.

THE RELATIONSHIP OF PERCEPTION TO BEHAVIOR IN THE FIRST GRADE

The intercorrelations of perceptual and behavioral data in the first grade year for Teacher III are shown in Table 30.

TABLE 30

Intercorrelations of Perceptual Factors with Behavior Factors
First Grade Study--Teacher III

Behavioral Factors	Perceptual Factors					
	PI Gen. Adq.	PII Accept. to Tchr.	PIII Adq. to Curric.	PIV Strong Enough	PVI Imp. to Tchr.	IX Others Friendly
BA Fully-Functioning Child	.38	.04	.21	.52	.07	.40
BB Good Student	.32	.20	.51	.22	.14	.33
BC Good Child	.62	.22	.36	.25	.32	.61

Note: Underlined correlations are significant at the 5 percent level or better.

Observations on the Relationship of Perception and Behavior in the First Grade

The following observations concerning the relationship of children's perceptions and behavior in the first grade are made with respect to only half the experimental population, those children working with Teacher III. These are the same children who were in class with Teacher II in the kindergarten.

1. The general pattern of relationships between perception and behavior, from kindergarten to first grade is highly similar. The correlations for children working in first grade with Teacher III are highly similar to those found for these same children working with Teacher II in the kindergarten. The two general observations made with respect to the kindergarten data continue to hold true in the first grade, namely:

a. The relationship of children's perceptions and behavior as seen by their teachers is generally positive but by no means identical, and

b. There are important variations from teacher to teacher in the degree of overlap of child perceptions and behavior.

In examining more specific relationships of perception to behavior in the first grade it will be helpful to refer to the behavioral items making up the three behavior factors for the first grade year. For easy reference they are repeated below:

Factor A--The Fully-Functioning Child

Outgoing
Secure
Independent
Numbers
Leadership
Spontaneous
Aggressive
Emotionally Stable
Oral Expression
Energetic
Cheerful
Acceptable to Boys
Acceptable to High Status Peers
Acceptable to Girls

Behavior Factor B The Good Student

Handwriting
Reading
Creativity
Attention Span
Art
Written Expression
Coordination of Small Muscles
Coordination of Large Muscles
Work Habits
Numbers
Independent
Music
Dependable
Cooperative

Behavior Factor C The Good Child

Cooperative
Acceptable to Boys
Dependable
Low Hostility
Work Habits
Acceptability to High Status Peers

2. *Children's feelings of general adequacy correlate significantly with Behavioral Factor A, The Fully-Functioning Child, and Behavioral Factor C, The Good Child.* The perception of general adequacy also comes very close to showing a significant relationship with The Good Student category. It would appear that the child who perceives himself as an adequate person is also more likely to be seen by others as behaving in a fashion that is outgoing, independent, spontaneous, aggressive, emotionally stable, energetic and acceptable to his peers. His behavior is also likely to be seen as cooperative, dependable, having low hostility, good work habits and the like.

Are the child's perceptions of adequacy a function of the teacher's evaluation of him? Or are the teacher's evaluations of his behavior a consequence of the child's feelings of adequacy about himself? In the case of the high relationship between the child's feeling of adequacy and the Good Child category, for example, one might ask whether the feeling of adequacy is a consequence of the approval the child has from the adults in his world or whether the reverse is true; he is seen by adults as a good child because of the behavior produced from his concepts of himself as adequate. The probability is that both of these conditions exist. Since perception is a function of experience and, in turn, produces behavior, the judgments of teachers about children must have important effects upon the concepts which children hold of themselves. However, since the general adequacy factor found in this research is a very large global factor involving a wide variety of the child's perceptions of himself and his world both in and out of school, the authors are inclined to believe that the results found here are probably more cause than effect; that is, the child's perceptions of himself as adequate are producing behaviors which are seen by his teachers as essentially positive.

3. The child's feelings of acceptability to his teachers in this grade are not significantly related to the teacher's ratings of his behavior. This finding is similar to that in the kindergarten year and suggests that in this class the child's feelings of acceptability to his teacher are not dependent upon his "good" behavior. This is a highly complimentary finding for the teacher. Apparently the children in this class can feel acceptable to their teacher no matter what their behavior. It would be interesting to know if a similar relationship would be found in more traditional schools or whether the relationship

found here is an artifact of the laboratory school setting.

4. *The child's feelings of being adequate to the curriculum are significantly related to his teacher's judgments of him as a good student and also with respect to the teacher's judgment that he is a good child.* The first grade child's perceptions of himself as a student tend to conform to his teacher's judgments of him.

5. *The child's feeling of being strong enough is related to fully-functioning behavior but not to judgments of him as a good student or as a good child.* We have seen that the fully-functioning behavior factor describes the robust, outgoing, active, energetic youngster. It is not surprising, therefore, that the child's feeling of being strong enough and enough in athletics should be highly related to this item. It is not surprising, either, to find that this perceptual factor is not significantly related to scholarship or "goodness."

6. *The child's feeling of being important to his teachers shows no significant relationship with any of the behavioral factors in first grade.*

7. *The child's feeling that others are friendly is significantly related to his behavior as a fully-functioning child and as a good child.* The successful child seems to be one who feels other people are friendly. Or stated the other way around, children who feel that others are friendly behave in ways that make them more likely to be judged as fully-functioning or good children.

8. *Fully-functioning first grade children are more likely to perceive themselves as generally adequate, as strong enough, and to perceive other people as essentially friendly.*

9. *First grade children who are judged to be good students are also likely to feel adequate to the curriculum.*

10. *Children who are judged to be good children by the teacher are likely also to feel generally adequate, adequate to the curriculum and to feel that other people are essentially friendly.*

THE RELATIONSHIP OF CHILDREN'S PERCEPTIONS TO VITAL STATISTICS

For Group III

The intercorrelations of perceptual factors with vital statistics for first grade children with Teacher III are shown in Table 31.

TABLE 31

Intercorrelations of Perceptual Factors with Vital Statistics First Grade Study--Teacher III

Vital Statistics	Perceptual Factors					
	FI Gen. Adq.	FII Accept. to Tchr.	FIII Adq. to Curric.	FIV Strong Enough	FVI Imp. to Tchr.	FIX Others Friendly
Chronological Age	.03	.15	.19	-*.47*	.09	-.04
Weight	.14	.12	.15	.06	-.04	-.02
Height	.17	.25	-.26	-.08	.32	.03
Absences	-.24	-.31	-.32	.27	-.11	.00
Sex	-.24	-.15	-.18	.12	-.24	.03

Note: Underlined correlations are significant at the 5 percent level or better. Negative signs on the sex category indicate female; positive indicates male.

An examination of Table 31 shows only one intercorrelation achieving a significant level. That is the negative correlation between chronological age and the child's feeling of being strong enough. This negative finding also existed for this group of children in the kindergarten year although it did not reach a significant level. The correlation suggests that older children in the first grade are less likely to feel strong enough. It may be that a few children retained in the kindergarten an extra year because of lack of maturity are providing the major weight to this relationship.

The consistently negative correlations of number of absences with Perceptual Factors I, II, III and VI are worthy of note. If we can assume a causal relationship here, these findings would suggest that absence from school creates difficult problems of self-regard. The reverse may also be true that problems of self-regard result in absences.

For Group IV

The intercorrelations of perceptual factors with vital statistics for first grade children with Teacher IV are shown in Table 32.

An examination of Table 32 shows that the child's feeling of being strong enough is negatively correlated with weight. This finding also existed with this group of children when they were in kindergarten with Teacher I. The significant negative relationships of height with Perceptual Factors II and III and height with Perceptual Factor III, however, are new findings for this group in the first grade. If one adds to these significant

TABLE 32

Intercorrelations of Perceptual Factors with
Vital Statistics
First Grade Study--Teacher IV

Vital Statistics	Perceptual Factors					
	PI Gen. Adq.	PII Accept. to Tchr.	PIII Adq. to Curric.	PIV Strong Enough	PVI Imp. to Tchr.	PIX Others Friendly
Chronological Age	-.29	-.26	-.29	-.38	-.12	-.14
Weight	-.33	-.43	-.36	-.47	-.18	-.26
Height	-.26	-.45	-.40	-.24	-.21	-.16
Absences	.04	.19	.14	.07	.13	.18
Sex	-.06	.08	.05	.28	-.46	.24

Note: Underlined correlations are significant at the 5 percent level or better. Negative signs on the sex category indicate female; positive indicates male.

items, all others of a negative character, it would appear that for these children, older, heavier, taller children are also likely to perceive themselves and others in more negative fashion. This is a finding that seems to run contrary to expectation. Early school years are usually regarded as times when the child's physical prowess is at a premium and his relationships with others is likely to be strongly influenced by his size and weight. For these children the opposite condition seems to exist. These results do not appear for either teacher in kindergarten nor for Teacher III in first grade, suggesting the possibility that they may be a function of the particular values held by Teacher IV.

CHAPTER V

CHANGES IN PERCEPTION AND BEHAVIOR FROM KINDERGARTEN TO FIRST GRADE

The second major question asked in this research was: What changes in perception and behavior occur as the child moves from kindergarten to first grade? To answer this question, the data were subjected to three kinds of analysis:

1. To examine the changes occuring in children's perceptions as they moved forward in school, the perceptual data obtained in the kindergarten year was compared with perceptual data for the same children obtained in first grade.

2. To determine changes occuring in the behavior of the children, behavioral data for children in the kindergarten year was compared with that in the first grade.

3. To determine whether perceptual changes were accompanied by behavioral changes as children moved from kindergarten to first grade, the differences between the two grades were correlated. That is to say, the difference between the perceptual data obtained in kindergarten and first grade was correlated with the difference between the behavioral data obtained in the two grades.

Changes in Perceptual Organization from the Kindergarten to the First Year

Perceptual Changes for the Total Group

The difference between the means of perceptual data obtained in kindergarten and first grade for the total group of subjects are shown in Table 33.

TABLE 33

Differences Between Means of Perceptual Ratings from Kindergarten to First Grade--Total Group

Item	Means Kdgtn.	Means First Grade	Means Diff.	Sign. Level
1. Adequate	3.2	3.2	0	
2. Able	3.2	3.0	.2	
3. Strong	2.7	3.1	-.4	.005
4. Attractive	2.8	2.9	-.1	
5. Worthy	3.4	3.3	.1	
6. Important to Children	3.3	3.4	-.1	
7. Liked by Children	3.2	3.1	.1	
8. Able to cope with Children	3.5	3.0	.5	.005
9. Identified with Children	3.4	3.3	.1	
10. Important to Adults	2.9	3.5	-.6	.05
11. Liked by Adults	2.7	2.8	-.1	
12. Able to cope with Adults	3.1	3.0	.1	
13. Satisfactory	3.1	3.4	-.3	
14. Important to Teacher	3.0	3.4	-.4	
15. Liked by Teacher	2.8	3.2	-.4	.005
16. Able to cope with Teacher	3.0	2.9	.1	
17. Satisfactory to Teacher	3.1	3.3	-.2	
18. Adequate to cope in School	3.1	3.0	.1	
19. Enough in reading	2.7	2.6	.1	
20. Enough in writing	2.5	2.7	-.2	
21. Enough in numbers	2.6	2.6	0	
22. Enough in music	2.5	2.8	-.3	.05
23. Enough in art	2.4	2.5	-.1	
24. Enough in oral expression	2.6	2.8	-.2	
25. Enough in athletics	2.5	3.0	-.5	.005
26. Enough in games	2.5	2.8	-.3	.01
27. Others satisfactory	3.3	3.1	.2	.05
28. Others friendly	3.1	3.2	-.1	
29. Adults friendly	2.7	2.9	-.2	
30. Adults helpful	3.1	3.4	-.3	.05
31. Adults interested	3.1	3.4	-.3	.05
32. Adults predictable	2.9	3.0	-.1	
33. Teachers friendly	2.7	3.2	-.5	.005
34. Teachers helpful	2.8	3.3	-.5	.005
35. Teachers interested	3.0	3.4	-.4	.005
36. Teachers predictable	2.5	2.8	-.3	
37. School is challenging	2.7	2.8	-.1	
38. School is helpful	3.1	3.3	-.2	.05
39. School is a happy place	2.9	3.1	-.2	

N=53

An examination of the mean differences in Table 33 shows a fourth of the changes occur in a positive direction with the remainder negative. Among the items achieving a statistical significance greater than .05 only two show changes in a positive direction. It would appear that perceptual ratings for this group of children move in a negative direction as they pass from kindergarten to first grade. In view of the fact that these ratings were made by two different groups of raters there is a possibility that this change may be due to a systematic bias; the second group of raters being somewhat "tougher" than the raters in the kindergarten year. The existence of such a bias seems most unlikely for the following reasons:

1. While the graduate student raters employed in the study could not be systematically compared because the kindergarten observers had left the University when the first grade study began and the first grade observers were not available during the kindergarten year, the two directors of the project were common to both years of the study and participated in every perceptual rating during both years.

2. The difference in means for all perceptual ratings from kindergarten to first grade is only two-tenths of a point indicating that, if any bias exists, it is small.

3. One-fourth of the items in the perceptual ratings show significant changes in a positive direction, contrary to the general trend.

Positive Changes. It will be noted from Table 33 that two items change significantly in a positive direction, namely, Able to cope with Children and Others Satisfying. It is a major objective of kindergarten to help youngsters make adjustments to other children and to the larger world of the school. This increase in the child's feelings of being able to cope with children and find satisfaction in other children would seem to indicate that these kindergarten classes have been meeting those objectives.

Negative changes. The most significant items changing in a negative direction in Table 33 seem to fall in two major groups: one having to do with the child's feeling of strength and athletics and the other, with respect to his relationships with teachers. There is a decrease in the feelings of these children concerning their adequacy with respect to physical strength, athletics and games. Perhaps the feeling of less adequacy in these realms is a function of increased competition and a wider world with which to compare one's self. The discovery that it takes much more to be a big frog in a big puddle than it does in a small one is a sobering thought at any age level.

Four items with specific reference to teachers and one to the school (school is helpful) moved in a negative direction. The child's feeling of being liked by his teacher, as well as his feelings that teachers are friendly, helpful and interested all move downward. It would be interesting to see research from other schools to discover whether these changes are a function of these particular teachers or, whether the changes indicated here are a general accompaniment of the increased structure and demands of the first grade year. A kindergarten is, for most children, a much freer place than the first grade. In first grade the academic curriculum becomes increasingly important and demands made on the child for conformity and accomplishment are greater. Since the teacher is necessarily the instigator and controller of these events, it may be that the feelings indicated here are brought about by the increased demands on children made by teachers.

Only one of the perceptual items relating to the curriculum shows any significant change. That has to do with the child's feeling of being enough with respect to music.

A third cluster of items moving in a negative direction has to do with the child's feeling of adequacy with respect to adults. The child's feeling of being important to adults, and his feeling that adults are helpful and interested in him, decreases from kindergarten to first grade.

The Effects of Different Teachers

The results for the total group presented in Table 33 tend to obscure a number of important differences in the two groups of children that seem to be a consequence of working with different teachers. Table 34 presents the changes occurring for those children moving from Teacher II in kindergarten to Teacher III in first grade. Table 35 shows the changes occurring for those children moving from Teacher I in kindergarten to Teacher IV in first grade. A comparison of these tables reveals some

TABLE 34

Differences Between Means of Perceptual Ratings from Kindergarten to First Grade--Teachers II & III

Item	Means Kdgtn.	Means First Grade	Means Diff.	Sign. Level
1. Adequate	3.3	3.3	0	
2. Able	3.3	3.0	.3	
3. Strong	2.8	3.1	-.3	.05
4. Attractive	3.0	2.9	.1	
5. Worthy	3.4	3.4	0	
6. Important to Children	3.4	3.6	-.2	
7. Liked by Children	3.4	3.0	.4	.01
8. Able to cope with Children	3.6	3.0	.6	.005
9. Identified with Children	3.6	3.4	.2	
10. Important to Adults	2.9	3.5	-.6	.005
11. Liked by Adults	2.7	2.9	-.2	
12. Able to cope with Adults	3.2	3.0	.2	
13. Satisfactory to Adults	3.1	3.4	-.3	
14. Important to Teacher	3.0	3.4	-.4	.01
15. Liked by Teacher	2.6	3.1	-.5	.005
16. Able to cope with Teacher	3.0	2.8	.2	
17. Satisfactory to Teacher	3.1	3.3	-.2	
18. Adequate to cope in School	3.3	3.0	.3	.05
19. Enough in reading	2.8	2.6	.2	
20. Enough in writing	2.6	2.5	.1	
21. Enough in numbers	2.8	2.5	.3	
22. Enough in music	2.6	2.8	-.2	
23. Enough in art	2.5	2.7	-.2	
24. Enough in oral expression	2.7	2.8	-.1	
25. Enough in athletics	2.6	3.1	-.5	.005
26. Enough in games	2.6	2.8	-.2	
27. Others satisfactory	3.4	3.2	.2	
28. Others friendly	3.2	3.2	0	
29. Adults friendly	2.7	2.9	-.2	
30. Adults helpful	3.1	3.4	-.3	
31. Adults interested	3.1	3.4	-.3	
32. Adults predictable	2.9	2.9	0	
33. Teachers friendly	2.6	3.0	-.4	.01
34. Teachers helpful	2.6	3.2	-.6	.01
35. Teachers interested	2.9	3.3	-.4	
36. Teachers predictable	2.5	2.8	-.3	.05
37. School is challenging	2.7	2.7	0	
38. School is helpful	3.1	3.2	-.1	
39. School is a happy place	2.9	3.1	-.2	

N=29

TABLE 35

Differences Between Means of Perceptual Ratings from Kindergarten to First Grade--Teacher's Groups I & IV

Item	Means Kdgtn.	Means First Grade	Means Diff.	Sign. Level
1. Adequate	3.1	3.1	0	
2. Able	3.0	3.0	0	
3. Strong	2.7	3.1	-.4	.01
4. Attractive	2.6	2.9	-.3	.05
5. Worthy	3.3	3.3	0	
6. Important to Children	3.1	3.3	-.2	
7. Liked by Children	2.9	3.2	-.3	
8. Able to cope with Children	3.4	3.1	-.3	
9. Identified with Children	3.2	3.2	0	
10. Important to Adults	2.8	3.5	-.7	.005
11. Liked by Adults	2.8	2.8	0	
12. Able to cope with Adults	3.1	3.0	.1	
13. Satisfactory to Adults	3.0	3.3	-.3	
14. Important to Teacher	3.0	3.4	-.4	.05
15. Liked by Teacher	3.0	3.3	-.3	.05
16. Able to cope with Teacher	3.1	3.0	.1	
17. Satisfactory to Teacher	3.2	3.4	-.2	
18. Adequate to cope in School	2.8	3.1	-.3	.05
19. Enough in reading	2.5	2.7	-.2	
20. Enough in writing	2.4	2.9	-.5	.005
21. Enough in numbers	2.4	2.8	-.4	.05
22. Enough in music	2.5	2.9	-.4	.05
23. Enough in art	2.3	2.4	-.1	
24. Enough in oral expression	2.6	2.9	-.3	.05
25. Enough in athletics	2.4	3.0	-.6	.01
26. Enough in games	2.3	2.8	-.5	.005
27. Others satisfactory	3.1	3.1	0	
28. Others friendly	3.0	3.2	-.2	
29. Adults friendly	2.7	2.9	-.2	
30. Adults helpful	3.3	3.4	-.1	
31. Adults interested	3.1	3.3	-.2	
32. Adults predictable	2.8	3.0	-.2	
33. Teachers friendly	2.9	3.4	-.5	.01
34. Teachers helpful	3.0	3.5	-.5	
35. Teachers interested	3.1	3.4	-.3	.05
36. Teachers predictable	2.6	2.8	-.2	
37. School is challenging	2.8	3.0	-.2	
38. School is helpful	3.0	3.5	-.5	.005
39. School is a happy place	3.0	3.0	0	

N=24

very important differences in the two classes. Among these are the following:

1. In the group of children moving from Teacher II to III, 12 of the 39 items of the perceptual scale change in a more positive direction. For those children moving from Teacher I to IV, however, only two items change in a positive direction.

2. The generally negative character of changes in perceptions of children working with Teacher I and IV is even more striking with respect to seven perceptual items in which the direction of change reverses, thus canceling out in the Total group results. These items are shown in Table 36.

TABLE 36

Perceptual Items Showing Changes in Direction in Class Working with Teachers I and IV Compared with Class Working with Teachers II and III

Perceptual Item	Group II-III		Group I-IV	
	Diff. of Means	Significance	Diff. of Means	Significance
4. Attractive	.1	no	-.3	.05
7. Liked by Children	.4	.01	-.3	no
8. Able to cope with Children	.6	.005	-.3	no
18. Adequate to cope with school	.3	.05	-.3	.05
19. Enough in reading	.2	no	-.2	no
20. Enough in writing	.1	no	-.5	.005
21. Enough in numbers	.3	no	-.4	.05

It would appear from these results that the children moving from Teacher I to IV were subjected to experiences which caused them to feel less adequate in school work and with other children, as well as less attractive.

The question may be raised whether the losses sustained by the children working with Teachers I and IV are a consequence of their experience since coming to school or whether these were differences in the two groups of children at the very beginning. To answer this question, the means of both groups in kindergarten and first grade were compared. The analysis revealed that children working with Teachers I and IV had more positive perceptual scores on 31 items, identical scores on 3 items and more negative scores on 8 items in the kindergarten year. The same children in first grade were superior on only 12 items, identical on 11 and more negative on 16. These results tend to corroborate those above. It seems quite clear that the experience of those children working with Teachers I and IV have somehow contributed to lowered feelings of adequacy with respect to school work and peer relationships as compared to their fellow students.

It has already been observed in this research that the behavior ratings produced by Teacher IV were so divergent from those of her colleagues as to indicate a quite different set of values governing her behavior. From the results reported here on the perceptual organization of children in her class, it would appear that these differences are also having effects upon the children in her class. It is evident that teacher attitudes may have important effects upon children's perceptions even in so short a period of time as the two or three months these children were with Teacher IV before the collection of perceptual data began. The relationship of teacher attitudes to children's perceptions would seem to be a most important area in which further research is called for.

Observations on Perceptual Changes from Kindergarten to First Grade

Three major findings with respect to the changes in children's perceptions from kindergarten to first grade seem worthy of particular note. These are:

1. *Children's perceptions tend to become less favorable from kindergarten to first grade with respect to:* a) *general adequacy,* b) *strength and athletic prowess*, c) *relationships to teachers and adequacy to do schoolwork*, *and* d) *the child's relationships to adults*.

2. *Perceptions showing improved levels of adequacy are those with respect to the child's feeling of being able to cope with children and his feeling that others are satisfying*.

3. *Changes in perception may be markedly affected by the particular teacher with whom children are working*.

The adjustment of the child to the business of going to school has long been regarded as an important developmental task for young children. The findings of this research illustrate that these tasks may also involve important changes in children's perceptions.

1. It may be that the decreases in feelings of adequacy noted in Item 1 above are a consequence of the greater demands imposed upon a child as he grows older. The indulgence with which many young children are treated while they are young rapidly gives way in the early school years to increasing expectations

on the part of those who surround him. Life becomes more specific and more demanding. Despite the fact that educational philosophy has established the kindergarten as a bridge from infancy to childhood, the shift is too great to be made smoothly and easily. Progression into first grade requires the child to adjust to a more and more precise and prescribed curriculum. Small wonder that these new demands should raise questions in the mind of the child as to his adequacy to deal with life.

2. The business of going to school also requires the child to operate in a much wider life space than has formerly been true. School is not just a world of greater demands. It is a world of infinitely more possibilities and choices, too. Old values and old techniques may no longer be adequate. The child who has been the fastest runner in his neighborhood play group may discover this is a poor accomplishment, indeed, when thrown into competition with his peers in the public school. A bigger, more complicated world required stronger and more varied techniques for coping. It seems very likely that these adjustments may play an important part in the decreased feelings of adequacy noted in these results.

3. It may be that decreased feelings of adequacy with respect to relationships with teachers and with schoolwork is also an outgrowth of changes in attitudes toward children on the part of the teachers themselves. Educators have often pointed out that upper grade teachers are much more curriculum-centered than person-centered. With the necessity for teaching

an increasingly precise, "objective" curriculum teachers may become more concerned with subject matter rather than the person who is learning it. This increasing depersonalization may be perceived by the child as a less warm, interested relationship with his teachers.

Other teacher attitudes may also have the effect of reducing the child's feelings of adequacy. For many teachers a feeling of adequacy in the child is regarded as something to be deplored. There is a general belief among many people that a person who feels adequate will also be unmotivated or complacent. With such a belief they are likely to perceive it their duty to undermine a child's feelings of satisfaction as a device to motivate him to do better. Thus, many attempts to motivate children belittle accomplishment and emphasize what has not been achieved rather than what has.

4. The decreased feeling of adequacy with respect to their relationships with adults shown by the children in this research may also be a consequence of the general feeling that children are not supposed to feel adequate. This attitude is by no means confined to teachers. It is a widespread belief on the part of parents, too. As the child grows older he is likely to discover increasingly that the unquestioning acceptance he may have once had from adults is no longer true. There is a widespread belief among adults in our culture that failure is good for children. Accordingly, with the best of intentions to motivate a child, his inadequacies and failures may be pointed out to him in clear

and unmistakable fashion. Since children learn their self-concepts from the significant people who surround them, changes in adult attitudes and expectations cannot help but have important effects upon the experience of the child.

5. It may be that part of the reason for the decrease in feelings of adequacy as children move from kindergarten to first grade is a function of the increasing frequency of competition. In addition to the natural competition which children are likely to engage in with each other, competitive effort is also urged upon children by adults and teachers as a means of motivation. For the children who are successful in such competition feelings of adequacy may be increased. For those children, however, who feel unable to compete successfully, the necessity for doing so may only result in discouragement and lowered feelings of adequacy. It may be that such negative consequences of competition are partly responsible for the decreases in feelings of adequacy demonstrated by these children.

6. The marked differences between the changes shown in children working with Teacher IV as compared to the other group indicates quite clearly the impact of individual teachers on children's feelings about self and others. Children's perceptions are derived from their experiences with significant others. As significant persons in the lives of children, the attitudes and personalities of teachers must have important effects upon the ways in which children see themselves and the world in which they live. These effects are likely to be most marked in the

early school years when teachers are in closer contact with children and when children regard them as much more important than they will later. To date we have little or no research on the question of teacher behavior and child self conceptions. It would be interesting to know, more specifically, what are the factors that affect this vital interrelationship.

BEHAVIORAL CHANGES FROM KINDERGARTEN TO FIRST GRADE

For Children Moving from Teacher II to Teacher III

Behavior changes from kindergarten to first grade are presented in Table 37 for that group of children moving from Teacher II in kindergarten to Teacher III in first grade. From kindergarten to first grade, 14 of the 29 items show changes of a magnitude sufficient to achieve statistical significance. Seven of these are in a positive direction while seven are negative.

More Positive	More Negative
spontaneous	energetic
dependable	attractive
creativity	leadership
music	cheerful
written expression	hostility
art	acceptable to girls
reading	oral expression

An examination of the negative items in this table would seem to suggest that with increasing maturity these children are less likely to be seen by their teachers as attractive. The increasing hostility and decreasing cheerfulness of these children would also seem to indicate that the first grade year may be somewhat more grim than kindergarten.

TABLE 37

Means & Differences of Behavioral Ratings from Kindergarten to First Grade--Teachers II & III

Item	Means Kdgtn.	Means First Grade	Means Diff.	Sign. Level
1. Secure	2.7	3.1	-.4	
2. Independent	2.3	6.1		
3. Emotionally Stable	2.8	2.9	-.1	
4. Spontaneous	2.8	2.3	.5	.005
5. Aggressive	2.6	2.5	.1	
6. Energetic	2.2	2.5	-.3	.05
7. Attractive	1.6	2.0	-.4	.05
8. Outgoing	2.3	2.6	-.3	
9. Cooperative	2.0	2.1	-.1	
10. Dependable	2.4	2.1	.3	.005
11. Leadership	2.6	3.2	-.6	.005
12. Cheerful	1.9	2.4	-.5	.005
13. Creativity	2.3	2.0	.3	.05
14. Hostility	2.7	3.1	-.4	.05
15. Attention Span	1.9	2.2	-.3	
16. Acceptability to Boys	2.3	2.5	-.2	
17. Acceptability to Girls	2.3	2.8	-.5	.005
18. Acceptability to High Status Peers	2.5	2.8	-.3	
19. Coordination of Small Muscles	2.2	2.3	-.1	
20. Coordination of Large Muscles	2.0	2.2	-.2	
21. Reading	4.5	2.4	2.1	
22. Numbers	2.8	2.6	.2	
23. Music	2.4	2.1	.3	.05
24. Self-Care	2.2	2.3	-.1	
25. Oral Expression	2.2	2.6	-.4	.05
26. Written Expression	5.0	2.7	2.7	.005
27. Art	2.7	1.9	.8	.005
28. Handwriting	3.1	2.9	.2	
29. Work Habits	2.3	2.5	-.2	

N=29

In spite of the fact that the first grade year is likely to be more restrictive and controlled, these children have higher ratings on spontaneity and creativity than was true in the kindergarten age. The increasing confidence of these children with respect to such curriculum items as written expression and reading seems clearly in line with what we would normally expect at this age.

CHANGES IN COMPOSITION OF BEHAVIOR FACTORS FROM KINDERGARTEN THROUGH SECOND GRADE

Changes in Behavior Factor A--The Fully-Functioning Child

Changes in the composition of Behavior Factor A from kindergarten through second grade are shown in Table 38.

TABLE 38

Changes in Composition of Behavior Factor A--
The Fully-Functioning Child
from Kindergarten Through Second Grade

Item		Significant Factor Loading In		
		Kdgtn.	1st Grd.*	2nd Grd.
11.	Leadership	x	x	x
6.	Energetic-Apathetic	x	x	x
1.	Secure-Insecure	x	x	x
3.	Emotionally Stable-Un.	x	x	
20.	Coordination of Large Muscles	x		
12.	Cheerful-Sad	x	x	
4.	Spontaneous-Rigid	x	x	x
8.	Outgoing-Withdrawing	x	x	x
7.	Attractive-Unattractive	x		
2.	Independent-Dependent	x	x	x
25.	Oral Expression	x	x	x
22.	Numbers		x	
8.	Aggressive		x	
16.	Acceptable to Boys		x	
18.	Acceptable to High Status Peers		x	
17.	Acceptable to Girls		x	
23.	Music			x

* For one teacher (III) only in this year.

It is apparent from an examination of Table 38 that the behavioral factor for the Fully-Functioning Child holds up quite well through all three years of this study. All of these teachers seem to be responding positively toward the energetic, robust, active, spontaneous, well-adjusted child.

Behavior items, Attractive-Unattractive and Coordination of Large Muscles, characteristic of the kindergarten year disappear as important elements with progression to first and second year.

Changes in Behavior Factor B--The Good Student

Changes in the composition of Behavior Factor B are shown in Table 39.

TABLE 39

Changes in Composition of Behavior Factor B--
The Good Student from
Kindergarten Through Second Grade

		Significant Factor Loading In		
Item		Kdgtn.	1st Grd.*	2nd Grd.
13.	Creativity	x	x	
19.	Coordination of Small Muscles	x	x	
27.	Art	x	x	
28.	Handwriting	x	x	x
21.	Reading		x	x
15.	Attention Span		x	x
26.	Written Expression		x	x
20.	Coordination of Large Muscles		x	
29.	Work Habits		x	x
22.	Numbers		x	
2.	Independent		x	
23.	Music		x	
10.	Dependable		x	
9.	Cooperative		x	

* For one teacher (III) only in this year.

The changing items in Factor B--The Good Student--seem quite clearly to be a function of the changing curriculum from kindergarten to second grade. The kindergarten year includes very little in the way of formal curricula in reading, writing, numbers and the like. Rather, most of the child's activities center around social activities, art, music, and becoming more aware of the larger world of his immediate surroundings. It is, therefore, not surprising to find that creativity, small muscle coordination and art disappear from this factor by the time the child has reached the second grade. This is not to suggest that art and creativity are not important in second grade. They are simply not regarded as such important aspects of scholarship as they might be in the kindergarten year. With increased emphasis upon such matters as reading, writing, work habits, numbers and the like there is less room for the free-wheeling aspects of art and creativity.

Changes in Behavior Factor C--The Well-Behaved Child

Changes in the composition of Behavior Factor C are illustrated in Table 40.

TABLE 40

Changes in Composition of Behavior Factor C--
The Good Child from
Kindergarten Through Second Grade

Item	Significant Factor Loading In		
	Kdgtn.	1st Grd.*	2nd Grd.
10. Dependable-Undependable	x	x	
9. Cooperative-Uncooperative	x	x	
14. Hostility (low)	x	x	x
5. Retiring	x		
3. Emotionally Stable	x		x
29. Work Habits	x	x	
17. Acceptable to Girls	x		
16. Acceptable to Boys		x	x
18. Accept. to High Status Peers		x	
1. Secure-Insecure			x

* For one teacher (III) only in this year.

The passive, well-behaved child remains a clear-cut category in all three of the grades in this study.

3

An examination of Table 40 indicates that two items, Retiring and Acceptable to Girls, have disappeared from this factor in the first grade and by the time second grade has been completed the items Dependability, Cooperativeness and Work Habits also disappear. The well-behaved child seems to become increasingly defined as a child of low hostility and behavior that seems to the teacher to be emotionally stable and secure. The falling away of items Dependable, Cooperative and Work Habits seems to suggest also that the well-behaved child is being judged less and less in terms of his ability to deal successfully with the curriculum.

THE RELATIONSHIP OF PERCEPTUAL CHANGES TO BEHAVIOR CHANGES

Table 41 shows the correlations of perceptual data changes from kindergarten to first grade with the behavioral data changes during the same period for children working with Teachers II and III. In this table we have accepted only those items with a correlation of .34 or above as being sufficiently large for consideration.

From an examination of this table the following observations may be of significance:

1. *While some relationship exists between changes in perception and changes in behavioral ratings from kindergarten to first grade, the relationship is by no means a close one*. It is apparent that changes in perception are not necessarily mirrored in corresponding changes in behavior or vice versa.

TABLE 41

Correlations of Perceptual Changes from Kindergarten to First Grade with Behavior Changes from Kindergarten to First Grade for Group Working with Teachers II & III

	Behavioral Factors					
Perceptual Factors	A All Boy	B Good Student	C Good Child	Reading	Written Exp.	Art
I. Adequacy	.21	.07	.09	-.07	-.02	.06
II. Accept. to Tchr.	.50	.09	.48	-.11	-.09	.17
III. Adq. to Curric.	-.10	-.24	-.15	-.28	-.05	-.26
IV. Strong Enough	.20	-.34	-.11	-.05	.19	-.42
V. Imp. to Adults	.41	.16	.34	.06	-.07	.07
VI. Imp. to Tchr.	.28	.13	.21	-.01	.11	.31
Music	.19	-.37	-.15	.07	-.09	-.18
Art	.03	-.09	-.11	-.16	-.20	-.23
Others Friendly	.10	-.28	-.08	-.11	.07	-.17
Adults Predictable	.38	.23	.35	-.13	-.07	.13

N=29

Correlations above .34 are considered noteworthy.

2. No significant relationships appear at this level between changes in the child's feelings of adequacy and any of the behavioral categories scored by the teachers. This may be due to the fact that general adequacy is an all-pervasive feeling as a consequence of much experience and school has not yet had time to affect this concept deeply. It represents but a small part of the child's world at least in these early years. The fact that these ratings were made from about one-third to two-thirds of the way

through the first year may also have been a significant factor since this is but a very short time in which the child has been confronted with much in the way of formal curricular demands.

3. The child's feeling of being acceptable to his teachers varies directly with his teacher's ratings of him as being all boy or a good child, but not with the teacher's rating of him as a good student or with respect to the specific aspects of the curriculum. Apparently, for these children with these teachers, the child's feeling of being acceptable to his teachers is more related to personality and adjustment factors than to his success as a student. These results would seem to suggest support for the idea that it is possible to help a child feel adequate "as a person" despite the fact that his performance or achievement in school does not measure up.

4. Changes in the child's feelings of being adequate to the curriculum seem to have little relationship to changes in behavior ratings. None of these items reach the required level of significance but all correlations for this item are negative. This would seem to suggest that the child's performance had little effect upon his feelings of adequacy with respect to school work. This is a surprising observation and seems to run contrary to expectancy. Perhaps the explanation lies in the fact that, for these children just beginning their school work, adequacy is not yet defined in curricular terms. None of these children have yet had much opportunity to experience curricular failures.

5. Changes in the children's feelings of being strong enough correlate negatively with ratings of the child as a good student or enough in art. This seems to suggest that the invidious distinctions often made about the scholar and the athlete may begin much earlier in a child's life than we have anticipated.

6. Changes in the child's feelings of importance to adults and his feelings about the predictability of adults correlates positively with changes in his teacher's ratings of him as all boy or good child, but not to the curricular aspects of the child's ratings. This would seem to be in line with general expectancy. At this early stage in a child's life, his acceptability to adults is not likely to be a question of curricular matters. Parents and other adults at this stage in his life are reacting to what kind of a child he is rather than to what kind of a student he is.

CHAPTER VI

PREDICTION OF BEHAVIOR FROM PERCEPTUAL ORIENTATION

The third major question posed in this research was: Can children's behavior in subsequent years be predicted from present perceptions? More specifically, the problem was a) Can the child's behavior in first grade be predicted from his perceptual organization in kindergarten? and b) Can behavior in second grade be predicted from perceptual organization in first grade?

It will be recalled from the research design that predictions of the child's behavior for the next year were made for each child at the time final perceptual inferences (PC data) were recorded by the research staff. Behavior predictions were made on the same kind of score sheets as those used by the teachers in making their behavioral ratings and filed until the following year. They were then correlated with the behavior ratings made by the child's new teacher.

The question might be asked whether these predictions were, indeed, from the perceptual data or from the observed behavior from which the perceptual inferences were made. That is a question impossible to answer. Since inferences concerning each child's perceptual organization were based upon observations of the child's behavior, the bases for prediction cannot be said to be purely from perceptual data. It will be recalled that perceptual inferences were made from a total of three-and-a-half hours of observation of each child; three half-hour sessions in the classroom, one half-hour interview and three half-hour sessions in projective testing. Although this represents but a very small sample of the child's behavior, quite clearly the staff making these predictions could not set aside what it had seen of the child's behavior. How much their predictions were influenced by the observed behavior rather than perceptual inferences, therefore, remains a moot question. The results reported here are, strictly speaking, predictions of behavior made by observers steeped in a perceptual orientation to the research subjects. The results must therefore be interpreted, not as predictions from purely perceptual data, but predictions from perceptual information derived from a comparatively small sample of observed behavior.

BEHAVIOR PREDICTIONS FROM KINDERGARTEN TO FIRST GRADE

Predictions for the Total Group

Staff predictions and teacher behavior ratings for children in first grade are shown in Table 42. It can be seen from Table 42 that behavior predictions made by the research staff from perceptual data while the children were still in kindergarten were slightly lower (high scores indicate more negative behavior) than those made by the teachers judging the child's behavior in first grade. This means that first grade teachers regarded these children as more able than the research staff believed they would. The difference, however, is not very great and the two sets of scores seem remarkably close.

An examination of the correlations in Table 42 reveals

TABLE 42

Correlations of Behavior Score Predictions Made in Kindergarten with Teacher Ratings Made in First Grade for Total Group

Items	Kdgtn. Prediction Scores	1st Grade Teacher Ratings	Correlations	Sign. Level
1. Secure	3.0	2.8	.56	.01
2. Independent	2.6	2.4	.44	.01
3. Emotionally Stable	2.8	2.5	.48	.01
4. Spontaneous	2.8	2.3	.32	.05
5. Aggressive	3.0	2.5	.49	.01
6. Energetic	2.6	2.3	.48	.01
7. Attractive	2.2	1.7	.32	.01
8. Outgoing	2.9	2.3	.36	.01
9. Cooperative	2.7	2.0	.55	.01
10. Dependable	2.6	2.2	.54	.01
11. Leadership	3.5	2.9	.44	.01
12. Cheerful	2.7	2.2	.24	
13. Creativity	2.7	1.9	.46	.01
14. Hostility	2.8	2.6	.33	.05
15. Attention	2.5	2.3	.31	.05
16. Coordination Large Muscles	2.3	1.9	.37	.01
17. Accept. to Boys	3.0	2.3	.43	.01
18. Accept to Girls	3.0	2.5	.27	.05
19. Accept to Status Peers	3.1	2.4	.35	.01
20. Reading	2.9	2.5	.48	.01
21. Numbers	2.8	2.3	.33	.05
22. Communication	2.7	2.4	.40	.01
23. Music	2.6	2.2	.10	
24. Self-Care	2.4	2.0	.16	
Mean	2.8	2.3		

N=53

only three correlations out of the 24 which did not achieve a level of statistical significance. Sixteen of these correlations were significant at the .01 level and five at the .05 level. From these results it would appear that predictions of a child's behavior in future grades from a perceptual analysis made a year earlier can have real significance.

Apparently the staff was most successful in predicting teachers' ratings with respect to the items of security, cooperativeness, and dependability showing correlations in the 50's. They were also successful, although in somewhat lesser degree, in predicting teachers' ratings of independence, emotional stability, aggressiveness, energy, leadership, creativity, acceptability to boys, reading, and communication. They were least able to predict teachers' ratings of music and self-care. This seems to suggest that predictions are more likely to be accurate in respect to general aspects of behavior. More specific behaviors, like music and self-care, are less easy to predict.

Variations in Prediction in the Two Classes

Tables 43 and 44 show the correlations of predictions with behavior ratings for the group of children with Teacher III and IV in first grade. From an examination of these tables it appears that the research staff were about equally successful in predicting the teachers' ratings on the following general categories: Secure, Aggressive, Cooperative, Dependable, Emotionally Stable, Energetic, Creative, and Acceptability.

With respect to specific curricular items like Reading, Numbers and Communication, the research staff was successful in predicting results for Teacher IV but not for Teacher III. There is some evidence in earlier results that Teacher IV may be more oriented toward traditional first grade goals than

TABLE 43

Correlations of Behavior Score Predictions Made in Kindergarten with Ratings Made by Teacher III In First Grade

Items	Kdgtn. Prediction Scores	1st Grade Teacher Ratings	Corre-lations	Sign. Level
1. Secure	3.2	3.1	.51	.01
2. Independent	2.7	2.9	.52	.01
3. Emotionally Stable	2.9	2.9	.42	.05
4. Spontaneous	2.9	2.3	.30	
5. Aggressive	3.1	2.5	.52	.01
6. Energetic	2.6	2.5	.44	.05
7. Attractive	2.3	2.0	.37	.05
8. Outgoing	2.9	2.6	.36	
9. Cooperative	2.8	2.1	.53	.01
10. Dependable	2.7	2.1	.57	.01
11. Leadership	3.6	3.2	.50	.01
12. Cheerful	2.9	2.4	.24	
13. Creativity	2.8	2.0	.37	.01
14. Hostility	2.7	3.1	.31	
15. Attention	2.7	2.2	.29	
16. Coordination Large Muscles	2.5	2.2	.45	.05
17. Accept. to Boys	3.0	2.5	.37	.05
18. Accept. to Girls	3.0	2.8	.17	
19. Accept. to High Status Peers	3.1	2.8	.29	
20. Reading	3.1	2.4	.33	
21. Numbers	2.9	2.6	.13	
22. Communication	2.6	2.7	.35	
23. Music	2.7	2.1	.14	
24. Self-Care	2.5	2.3	.10	
Mean	2.8	2.5		

N=29

Teacher III and this may be responsible for the more exact prediction by the staff.

One item, Large Muscle Coordination, shows a negative correlation in Table 44. It seems likely that this may be due to some private definition of this item for Teacher IV.

TABLE 44

Correlations of Behavioral Score Predictions Made in Kindergarten with Ratings Made by Teacher IV in First Grade

Items	Kdgtn. Prediction Scores	1st Grade Teacher Ratings	Corre-lations	Sign. Level
1. Secure	2.8	2.4	.56	.01
2. Independent	2.5	1.9	.24	
3. Emotionally Stable	2.6	2.1	.51	.01
4. Spontaneous	2.7	2.2	.37	
5. Aggressive	2.9	2.4	.46	.05
6. Energetic	2.5	2.0	.56	.01
7. Attractive	2.1	1.8	.17	
8. Outgoing	2.8	2.0	.35	
9. Cooperative	2.5	1.9	.56	.01
10. Dependable	2.5	2.3	.52	.01
11. Leadership	3.3	2.6	.36	
12. Cheerful	2.6	1.9	.16	
13. Creativity	2.6	1.8	.55	.01
14. Hostility	2.8	2.1	.57	.01
15. Attention	2.3	2.4	.38	
16. Coordination Large Muscles	2.2	1.5	-.11	
17. Accept. to Boys	3.0	2.1	.54	.01
18. Accept. to Girls	3.0	2.2	.38	
19. Accept. to Status Peers	3.0	1.9	.48	.05
20. Reading	2.7	2.6	.68	.01
21. Numbers	2.5	2.0	.58	.01
22. Communication	2.8	2.1	.61	.01
23. Music	2.4	2.4	.15	
24. Self-Care	2.2	1.5	.09	
Mean	2.6	2.1		

N=24

BEHAVIOR PREDICTIONS FROM FIRST GRADE TO SECOND GRADE

Predictions for the Total Group

Table 45 shows the correlations of behavior score predictions made from children's perceptions in the first grade with teachers' behavior ratings made in the second grade for the

TABLE 45

Correlations of Behavior Score Predictions Made in First Grade with Teacher Ratings Made in Second Grade for the Total Group

Items	1st Grade Predictions	2nd Grade Teacher Ratings	Corre-lations	Sign. Level
1. Secure-Insecure	2.7	2.5	.44	.01
2. Independent-Dependent	2.5	2.3	.20	
3. Emotionally Stable-Unstable	2.7	2.4	.44	.01
4. Spontaneous-Rigid	3.1	2.2	.48	.01
5. Aggressive-Retiring	3.2	2.7	.47	.01
6. Energetic-Apathetic	2.9	2.4	.49	.01
7. Attractive-Un.	2.4	1.7	.43	.01
8. Outgoing-Withdrawing	2.9	2.4	.42	.01
9. Cooperative-Un.	2.3	1.9	.21	
10. Dependable-Un.	2.2	1.9	.32	.05
11. Leadership	3.4	2.8	.61	.01
12. Cheerful-Sad	3.0	2.2	.33	.05
13. Creativity	2.9	2.2	.06	
14. Hostility	2.5	3.4	.35	.05
15. Attention Span	2.5	1.8	.33	.05
16. Accept.to Boys	2.7	2.0	.58	.01
17. Accept. to Girls	2.7	2.4	.37	.01
18. Accept. to Status Peers	2.8	2.5	.46	.01
19. Coordination of Small Muscles	2.5	2.0	-.04	
20. Coordination of Large Muscles	2.6	2.0	.32	.05
21. Reading	2.5	2.1	.29	.05
22. Numbers	2.4	2.1	.43	.01
23. Music	2.7	2.1	.20	
24. Self-Care	2.3	1.8	.50	.01
25. Oral Expression	2.7	2.4	.50	.01
26. Written Expression	2.8	2.3	.62	.01
27. Art	2.6	2.0	.33	.05
28. Handwriting	2.6	2.5	.17	
29. Work Habits	2.4	2.1	.40	.01
Mean	2.7	2.2		
Number of Subjects	44			

44 subjects remaining in the experiment by that time. It is apparent from an examination of Table 45 that the research staff was highly successful in predicting the behavior of children in the following year from an understanding of their perceptions in the first grade. Mean behavior ratings of the staff tended to be somewhat lower than those of the teachers but correlations of predictions and behavior ratings show a consistently high level of significance. On only six items did the research staff fail to make a significant prediction.

As in the case of the first grade results, it is apparent that the staff was more successful in predicting general aspects of behavior than the more specific items having to do with the subjects of the curriculum, although, even with these items, predictions at the second grade level were better than those at the first grade year.

OBSERVATIONS WITH RESPECT TO PREDICTION FINDINGS

The prediction results reported in this chapter appear to support the following observations:

1. It is possible to make predictions of children's behavior from a study of their perceptual organization. In both years of this study the research staff was able to predict with considerable accuracy the behavior of children in the following year. When it is recalled that the staff perceptual ratings were made from comparatively small samples of behavior, the findings assume an even greater significance, for the predictions obtained are as good as, or better than, those generally achieved

by much more complex and formal devices. In an adjunctive study for her doctoral dissertation Mary Lamy (1963) compared the reading skills of the children involved in this research with their intelligence test scores and perceptual organization. She concluded that perceptual organization scores of the children in this research were at least as good a prediction of reading success as intelligence scores.

The fact that accurate predictions can be made from perceptual data also lends support to the principles of perceptual theory concerning the stability of the self concept. Apparently, even for children of this early age there is a sufficient stability of self perceptions to make possible important predictions about behavior.

The presence of valid predictions from perceptual data also suggests possibilities for a new dimension in diagnosis. Most diagnoses of child behavior are made in external terms. That is to say, they describe the child's behavior traits and achievements as they appear to an outside observer. This research, however, has sought to look at the child in a new dimension, as he sees his world and has demonstrated that predictions about behavior made from such data can have considerable validity. The answers found in diagnosis are always dependent upon the questions asked. It is conceivable, therefore, that the addition of perceptual analyses to usual diagnostic practices might add new insights to understanding children and greater precision in planning for them. In Lamy's (1963) study mentioned above, for example, the addition of perceptual scores to intelligence scores gave better correlations with reading success than either of these alone.

2. *Predictions of behavior from perceptual information are likely to be more accurate for general than for highly specific behaviors*. This finding seems consistent with self concept theory which holds that the more personal or central perceptions of the individual about himself and his relationships with his world are more stable than those peripheral aspects having to do with specific aspects of interaction.

3. *The fact that predictions about behavior can be made from perceptual data lends support to the use of the "self as instrument" in research methodology*. The predictions found in this research are as good as, or better than, those made by much more complex procedures based upon external approaches to behavior. It is apparent that sensitive observers can be trained to provide important and reliable research information, and the use of inference adds an important new dimension to the investigation of personality.

SOME OBSERVATIONS ARISING FROM THE CLINICAL STUDY OF THE RESEARCH SUBJECTS

The hypotheses explored in this study have been essentially statistical, concerned with trends, correlations and groups. While such data are important for scientific and research purposes, individuals are likely to be lost in the compilation of statistics. The data analyzed in this research were collected from intensive studies of individuals and the insights gained in this clinical approach to the children of the research were often extremely illuminating and provocative. Among these observations were the following:

1. As pointed out above, the research staff had the feeling they were engaged in a new kind of diagnosis. Most diagnostic studies provide descriptions of the individual as he is seen by outsiders. It is the purpose of a case history, for example, to gather the facts about an individual and to subject these facts to interpretation. The interpretations made are usually looked at from a psychologist's point of view and arranged in a fashion to fit his preferred system of thought. Such diagnoses are essentially explanatory or descriptive revealing how the individual got that way. The diagnoses made in this research were different. No attempt was made to acquire complete case studies of children and most of the materials included in orthodox descriptive analyses were not available to the research team. Despite this lack of detailed background information, the staff was able to make effective predictions. Even more important, although it does not show in the statistical results, the research staff was impressed with the clinical values of perceptual diagnosis in adding a new dimension to understanding children. Even in the comparatively short time spent observing these subjects (three-and-a-half hours) the attempt to see the child and his world through his own eyes provided important insights into individual personalities not ordinarily achieved in standard case history practice.

As one member of the research staff expressed it, "It's like understanding him, instead of understanding about him." The attempt to understand the child perceptually was like looking at him with another pair of glasses which made it possible to see things not otherwise apparent. When observed in this fashion, some of the ways in which he was seen by persons looking at him from an objective point of view were corroborated. Frequently, it also made it necessary to raise questions about the accuracy of some conclusions drawn about the child when he was being observed in more traditional fashion. Most interesting of all, the research staff found that a perceptual approach to observing children frequently contributed quite new conceptions about the child not previously observed under any conditions.

2. Although the staff members employed in this research project were sensitive people to begin with, all members of the staff came to feel that the discipline of looking at children in this way contributed greatly to making them much more sensitive than they had been before. This may have important implications for the training of teachers, nurses, social workers, counselors and others whose professional success depends upon depth-understanding of people. The preparation programs of such professions nearly all include training in observation as a means of developing sensitivity. In most programs, however, the traditional approach to observation has emphasized the collection of "facts" and "objectivity," even to the extent, in some programs, of discouraging or forbidding observers to make

interpretations of any kind. The predictions obtained from perceptual observations in this research and the experience of the research staff in inferential diagnosis suggest that such extreme demands for objectivity may be self-defeating by eliminating from observation and diagnosis the very element most needed for developing sensitivity. It may be that sensitivity is best learned, not from pure objectivity, but from disciplined inference.

3. A third major observation arising from the clinical experience of the staff has to do with still another dimension of diagnosis. As stated earlier in this chapter, the conclusions one arrives at in the process of diagnosis are determined by the questions asked in the first place. Traditionally, diagnosis has been concerned with the problem of "adjustment." The purpose of such diagnosis is the determination of the "normality" of the individual, whether he is "all right." This is an essentially static concept of diagnosis. It may be concerned with rehabilitation, in which the emphasis is upon getting the sick ones back to health, or its purpose may be prevention, in which case the goal is keeping people from getting off the track. The diagnosis of adequacy poses a different question. It is concerned, not with the static, but the dynamic. It does not ask, "Is the subject all right?" Rather, it asks, "How adequate is he?" Diagnosis for adequacy passes beyond the achievement of acceptability; its goal is personal fulfillment, the optimal realization of potentialities.

Seeing individuals in this way broadens the base for diagnosis. Since adequacy is a goal which all people seek, diagnosis is not restricted to the sick or possibly sick. It becomes a procedure to be followed for every child. Looking at the children in this research project from the point of view of personal adequacy, the research staff was able to observe, even in children judged satisfactory by teachers and peers, indications of inadequacy likely to result in serious difficulties in later years. It was the feeling of the research staff that the understandings gained in perceptual analysis could conceivably add a great deal to our understanding and planning for children's development.

CHAPTER SEVEN

GENERAL CONCLUSIONS

This research was designed to explore certain relationships between children's perceptions and their behavior in the early school years. To accomplish this, behavioral and perceptual data were collected on the children in two laboratory school classes over a three-year period as they progressed from kindergarten into the second grade. These data were then compared to answer three basic questions:

1. Whether there is any relationship between a child's perceptions of himself and his world, on the one hand, and the behavior he shows on the other.

2. Whether changes occurring in perception from year to year are accompanied by changes in behavior.

3. Whether it is possible to predict a child's behavior in a following year from a knowledge of his perceptions in the previous year.

Discussion of the detailed findings with respect to the above questions has been included in each of the four preceding chapters reporting on the specific findings of the research. In addition, a number of general conclusions seem warranted from an over-all view. Among these are the following:

1. The feeling of personal adequacy seems to have an all-pervasive importance in the child's perceptual organization. In both the kindergarten and first grade years of the study, a single perceptual factor having to do with the child's feeling

of adequacy or of "being enough" appeared with overwhelming importance among the perceptual factors obtained in the analysis of children's perceptions. This factor, alone, accounted for nearly 70 percent of the total variance in the perceptual data and seems clearly to represent a most important concern of these young children. Its existence has important implications for psychological theory as well as for practical application in curriculum planning.

From a theoretical view, the overwhelming character of this general adequacy factor provides support for the perceptual psychologists' claim that the striving for adequacy is a universal need of human beings. Combs and Snygg (1959, p. 46), for example, have described the fundamental human need as, "that great driving, striving force in each of us by which we are continually seeking to make ourselves ever more adequate to cope with life." Other writers have spoken of this basic striving as a need "to be enough," as a drive toward health, or actualization. By whatever name it is described it is apparent from the results of this research that the concern for adequacy is a most important aspect of the perceptual world of these subjects.

The importance of the feeling of adequacy in the perceptual world of the child also seems to have implications for educational planning. An appreciation of the importance and dynamics of the feeling of adequacy in the child's experience may result in more effective teaching if awareness of this factor is included as an ingredient in planning educational experiences.

Planning which fails to take this aspect of the child's experience into account, can conceivably be self-defeating. Educational experiences which do not seem to the child to be contributing to his feeling of adequacy may have little success no matter how carefully they have been worked out or how logical they may appear in the eyes of teachers and administrators. On the other hand, events perceived as increasing adequacy may be highly motivating even though they are valueless or undesirable from the view of adults. Sensitivity to this need in the child can make it a motivation for learning. Teachers who are unaware of or ignore its existence may find it operating at cross purposes with them.

The central character of the feeling of general adequacy in the child's perceptual organization also provides further support for the importance of success experience emphasized by many modern educators. In this research the feeling of adequacy is, in general, positively correlated with desirable adjustment and behavior. In contrast to the beliefs of some that "failure is good for children," the importance of the feeling of adequacy found here lends credence to the position of many educators that failure and humiliation are stultifying and stupefying, while success has the effect of building internal strength and confidence.

2. The values held by teachers are revealed in the judgments they make about the behavior of children. In this research, for example, factor analyses of teacher judgments about

children's behavior brought to light certain constellations indicative of the basic values held by the teacher herself. In fact, this relationship appeared with such clarity and significance as to suggest that factor analyses of teachers' ratings of children might well be used as research devices for the exploration of values held by teachers.

Factor analyses of the behavioral ratings made by the teachers in this research in each of the three years of the study revealed three common constellations of values in the ways they judged children. All of the teachers in this research were concerned about the child's psychological adjustment, his scholastic success and the "goodness" of his behavior. In addition, each of the teachers revealed three or four additional factors not shared by her colleagues, indicating that they were being motivated by individual values not generally held by the others. Some of these differences in teacher values were also accompanied by small but important differences in children's perceptions of themselves and their world.

It has often been pointed out by educators and mental hygienists that the teacher, as a significant person in the child's life, has important effects upon the child's personality structure. There is evidence in this research to support that belief in the changing patterns of child perceptions of self and the world as children move from one teacher's influence to another's. In the short time span of this research, these changes are not great. One would not expect them to be. In the much longer period of a child's whole scholastic career, they could well be of very great significance.

3. The relationship between children's perceptions and their behavior as described by their teachers shows a positive but low correlation. This relationship is in line with what would be expected on theoretical grounds. In perceptual psychology the behavior of an individual is understood to be direct function of his perceptual field at the moment of behaving. This does not mean, however, that a given perception will result in a given behavior, because behavior is always a consequence of the total field rather than any single perception. A particular perception, therefore, might result in many different behaviors and, conversely, the same behavior might arise from different perceptions depending upon what other perceptions exist in the gestalt of a particular moment of action. The correlation, therefore, between behavior and perception should generally be positive but low, as found in this research.

The effect of any given perception on behavior also depends upon its centrality in the perceptual field of the individual. Central aspects will have more effect upon behavior than peripheral ones. Since perceptions of self have this central quality, we would expect such perceptions to have closer counterparts in behavior than more specific perceptions. This relationship is borne out in these research findings in the greater accuracy of behavior predictions with respect to general "personality" characteristics than in the case of more specific behaviors like reading, writing, music or art.

On a more practical level the low relationship found in this research between perception and behavior seems to indicate that, while the perceptual world of the child and that of his teachers has some degree of overlap, they are by no means identical. Teachers and pupils live in different phenomenal worlds. This is a gap, of course, which can never be eliminated in its entirety. It can only be more or less successfully bridged by sensitive teachers skilled in understanding and using the child's own perceptions of himself and his world in the teaching process. The acquisition of such sensitive teachers is not easy, however. Even with the highly-sensitive laboratory school teachers involved in this research, the correlations between the child's perceptions and his behavior as judged by his teachers are uniformly low.

4. Changes occur in children's perceptions and in their behavior with progression from kindergarten to first grade. The most significant change for children of this research is the decrease in the feeling of adequacy they seem to be experiencing as they move from kindergarten to first grade. The question might be asked whether this is a general condition or one restricted to this group of children and this group of teachers. That, of course, is a question which can only be solved by broader research. The fact that these children's feelings about their adequacy decreases from kindergarten to first grade even with these high-quality laboratory school teachers, however, is a disturbing observation.

Modern thinking about the nature of self-actualization and the development of fully-functioning persons (ASCD, 1962) emphasizes repeatedly the importance of feelings of self-worth, self-esteem, and personal adequacy as necessary conditions for the development of fully-functioning persons. If this thinking is accurate, then any losses in an individual's feelings of fundamental adequacy are not to be taken lightly. Indeed, reduced feelings of adequacy, if long continued, may even have the effect of destroying human potentiality. The causes of the decrease in the feeling of adequacy found in these children cannot be determined from the findings of this research. It may be that the phenomenon has nothing to do with the child's school experience at all but, whatever the cause, it seems important that this matter be explored much more fully.

5. _Significant predictions about behavior can be made a year in advance as a consequence of perceptually-oriented studies of children._ That such predictions are possible lends further support to the basic postulate of perceptual psychology that behavior is a function of perception. The additional finding that predictions are more likely to be accurate with respect to general behavior than to specific behavior is also consistent with the nature of the perceptual field in which central aspects are conceived to be much more stable than peripheral ones.

The predictions made in this experiment were inferred from comparatively small samples of children's behavior--one and a half hours in projective testing and two hours in observation and interview. Nevertheless, the predictions made from this limited sample by the research staff showed a surprising degree of correlation with the behavioral ratings made by the child's teachers on the basis of eight months contact with him. These findings suggest that perceptual analyses can make important contributions to understanding a child and may add a valuable new dimension to diagnosis.

Teacher training institutions have long assumed that a knowledge about what children are like was important information for the professional teacher. Most institutions include in their curricula courses in human growth and development, child psychology or the like, designed to introduce the neophyte teacher to the accumulated knowledge about child behavior. Some colleges also provide intensive programs of classroom observation aimed at teaching students to make careful "objective" analyses of child behavior. The assumption underlying these programs is that understanding about child behavior will produce sensitive teachers keenly aware of their students and so better able to plan and implement effective educational experiences for them. While there is certainly merit in the assumption that knowledge about child behavior contributes to understanding children, the limited success of teachers colleges in turning out sensitive teachers makes clear that the relationship is by no means a close one. There is reason to believe understanding behavior from an external view represents only a part of understanding a person.

It may well be that the success of the research staff in this experiment in making predictions about children's behavior from a perceptual orientation points the way to an additional approach to the problem of developing sensitivity. Helping teachers-in-training to develop skill in looking at child behavior from an internal frame of reference as well as an external one may conceivably broaden the base of understanding and improve the production of sensitive teachers. The development of empathy and the making of perceptual inferences about students may be an important key to teacher effectiveness.

6. _The use of the observer himself as an instrument can be made to provide stable and reliable data for research._ It has been shown in this study that reliable inferences about children's perceptions can be made from fairly limited contacts with the child. In fact, inferences made by different observers working with the child in three projective situations were so nearly identical with those made as a consequence of four half-hour sessions devoted to observations and interviews that separate analyses of these data could safely be dropped after the kindergarten year. This was an unexpected finding in the research. It had been assumed in the planning stages that projective situations would be much more revealing of perceptions than observations or interviews. The research results suggest however that, for young children like these, sensitive observers can make reliable inferences from _either_ kind of behavior sample. The potentiality of the use of the "self as instrument" in research practice is also supported in this research by the fact that highly significant

predictions of children's behavior a year later could be made from such inferences.

Perceptions cannot be directly explored by the usual objective techniques available to us. Perceptual psychologists, however, have maintained that human perceptions could be adequately explored by means of inferences from observed behavior. This attitude has been regarded with great skepticism by some psychologists designing research in the more orthodox framework of objective psychology. The findings of this research seem to support the perceptual psychologists' position. When used with proper safeguards it is apparent the research observer himself can be used as a valuable addition to the traditional tools of research.

SOME COMMENTS ON THE NEED FOR FURTHER RESEARCH

This research project is a pioneer study. It is a first attempt to explore the perceptual organization of young children in the early school years. Like any research project worth its salt, it raises many more questions than it presumes to answer. It was the original intention of the directors of this research to follow the children who served as subjects as far as possible through their educational careers. However, the demands made by the project on the time and energies of the professional staff of the college proved so great that it was decided to terminate the research after the two-year period provided in the U. S. Office of Education grant. This action was taken with great reluctance and it is the hope of the directors of this project that it may be possible to study these children again at several periods during their passage through school to determine what has become of them. Meanwhile, it is to be hoped that other workers may be stimulated to make similar studies.

Most of the current work being done on the self concept and perception is cross-sectional or confined to the investigation of the perceptions of older, more mature persons. To date, very little has been done in the way of longitudinal research. There are innumerable questions to be answered concerning the ways in which children's perceptions of themselves and the world develop and change as they grow toward maturity. We know little or nothing about these matters and research is badly needed.

If the self concept has the important role we are beginning to believe it does in the determination of human behavior, we need to know a great deal more about the effects of school practices upon the development of both positive and negative self-conceptions. What kinds of practices affect the self concepts of children? Every teacher since teaching began has been having some kind of impact upon the self concepts of his students, but at this point in 1963 we are still without definitive answers to the problem.

In recent years, many psychologists have become interested in the problems of human adequacy. Increasingly we have been shifting our sights from a static conception of human adjustment to a concern for fulfillment and self-actualization. The results of this research project have provided some inkling of the importance of a feeling of adequacy in the personality structure of kindergarten and first grade children, but we need to know much more about the growth and the development of adequacy at all ages. For school children, particularly, we need to know much more about the kinds of experiences, teachers, classroom atmospheres and peer relationships which contribute to or detract from the feelings of adequacy.

The directors of this project are particularly intrigued with the possibilities of factor analysis techniques in the exploration of human attitudes, values and "what is important?" Apparently, factor analyses of judgments made by teachers about children are highly revealing of the motives and values of teachers, themselves. The factor analysis of teacher judgments thus seems to provide a kind of projective test of personality structure with a great deal more statistical sophistication than is available in the usual projective instrument. This is a research tool with fascinating possibilities.

Finally, the experience of the research staff in this study has pointed to the need for clinical studies of children in depth using this new technique of perceptual inference. The self, after all, is a highly personal individual organization and cannot be adequately understood on a group basis. Many of the problems concerning the growth and development of perception do not lend themselves to statistical treatment. Such methods tend to obscure the very uniqueness of the individual personality which perceptual approaches to personality study were designed to bring to light. There is a pressing need for research inquiring into the growth and development of children's perceptions through the study of individual children as they grow and participate in all aspects of modern life.

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APPENDIX A

SAMPLE CASE

The following pages include the complete records on Child 15/111 compiled in the second year of the study while she was in first grade. The records were chosen at random from the file and have been modified only to the extent necessary to avoid possible embarrassment.

CHILD

PERCEPTION SCORE SHEET

RATER # 12 CODE # 15/111

DATE 2/13/62 RECORD # 1

TESTS - [✓ FIA] SIT PST - PT

RECORDS OF: PC

OBS. 1 2 3 INT - PO

SA
(1) **Adequate - Inadequate** 0 1 2 [✓ 3] 4 5 3

DESCRIPTION: S came to playroom willingly and in smiles talking of last year's experience. She went to a puzzle and did this quite well and without any hesitation. S talked of brothers--Tom 5, Mark 8, David 12. Told of all having "72 crayons" and they share. She plays mostly with Tom and Mark. Also with dolls. "I have the most dolls of anything." Guess what? Tom and Mark built a fort yesterday and let me go in. They might build one this afternoon too." Dad is in construction work. "Guess what?" When Dad sleeps on Sunday, he doesn't really because the boys run through the house. And you shouldn't do that. Mother works at home. "Mother and I raked the yard yesterday while the boys played." Now S turned to policeman puzzle--Mark got a policeman for Christmas "but he won't let me play with it." Talked of girl friends at home that she plays with. Now S went to the board. Left handed. Wrote name (very well) in full. Age 6. Wrote more names and changed hands. E asked her to write name again. Wrote as well with right hand. Reads to herself at home. Now she began to draw. "Oh, a house with flowers--it's make believe." Parents are too busy to play with her. "I have enough people to play with and when I don't I color." She had brought doll to school to share. Seems to like everything about school. "Guess what? One time I didn't go home from school. Mark and Tom asked 'Where's--? Where's--?' And Mother had to tell them."

SAI

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	
(4)	Attractive - Unattractive	0	1	2	[✓ 3]	4	5	
(5)	Worthy, lovable -Unworthy	0	1	2	[✓ 3]	4	5	

SWC

(6)	Important - Unimportant	0	1	2	[✓ 3]	4	5	
(7)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	
(8)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	
(9)	Identified with - Alienated	0	1	2	[✓ 3]	4	5	

SWA

(10)	Important - Unimportant	0	1	2	[✓ 3]	4	5	
(11)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	
(12)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	
(13)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	

SWT

(14)	Important - Unimportant	0	1	2	[✓ 3]	4	5	
(15)	Liked by - Not liked by	0	1	2	[✓ 3]	4	5	
(16)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	
(17)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	

SIS

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	

SSC

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	
(20)	Enough writing - Not	0	1	[✓ 2]	3	4	5	
(21)	Enough numbers - Not	0	1	[✓ 2]	3	4	5	
(22)	Enough music - Not	0	1	2	[✓ 3]	4	5	
(23)	Enough art - Not	0	1	[✓ 2]	3	4	5	

(24)	Enough oral exp. - Not	0	1	[✓ 2]	3	4	5	________
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	________
(26)	Enough games, etc. - Not	0	1	[✓ 2]	3	4	5	________
POC								
(27)	Others Sat. - Dangerous	0	1	2	[✓ 3]	4	5	________
(28)	Others friendly - Unfriendly	0	1	[✓ 2]	3	4	5	________
POA								
(29)	Adults friendly - Hostile	0	1	[✓ 2]	3	4	5	________
(30)	Adults helpful - Hindering	0	1	2	[✓ 3]	4	5	________
(31)	Adults interested - Not	0	1	2	[✓ 3]	4	5	________
(32)	Adults predictable -Unpred.	0	1	2	[✓ 3]	4	5	________
POT								
(33)	Tchs. friendly - Hostile	0	1	2	[✓ 3]	4	5	________
(34)	Tchs. helpful - Hindering	0	1	2	[✓ 3]	4	5	________
(35)	Tchs. interested - Not	0	1	2	[✓ 3]	4	5	________
(36)	Tchs. predictable - Unpred.	0	1	2	[✓ 3]	4	5	________
POS								
(37)	Sch. is challenging - Boring	0	1	[✓ 2]	3	4	5	________
(38)	Sch. helpful - Hindering	0	1	[✓ 2]	3	4	5	________
(39)	Sch. happy place - Sad	0	1	[✓ 2]	3	4	5	________

PST LEVEL:	Enumeration	Description	Interpretation simple - complex

CHILD

PERCEPTION SCORE SHEET

RATER # 12　　　CODE # 15-111

DATE 2/14/62　　　RECORD # 2

TESTS - PIA [✓ SIT] PST - PT

RECORDS OF:　　　PC

OBS. 1 2 3 INT - PO

SA

(1) **Adequate - Inadequate** 0 1 2 [✓ 3] 4 5 3

DESCRIPTION: S manipulated a girl - had her pushing the baby in the carriage. The baby was the T. T sat the children down. They were listening to a story. "Oh, good grief" when a few dolls fell over. T called a girl to push the baby. Little girl washed her hands. Now it's playtime. First T wants them to rest. Do you 'spect there'll be enough? S counted children and put some girls with boys to share the rug.

SIT 1 (Rest time - boy and girl _ T got mad. Wouldn't let them sleep together. Put him on another girl's rug. Same thing happened and she separated them. T has to stand and watch.

SIT 2 (Girl and clock) T saw and knew it was an accident and told the little girl to go back to her work. Looked for a broom. T bro't another green one the next day.

SIT 3 (Boys and block and girl wanted to play) They let her play. She's their girlfriend. They played and then knocked it down. T saw and told them to go to their tables.

SIT 4 (T left room) All children messed room up - blocks, chairs. T came back - saw messy room--she screamed. She is going to spank all the children. She always takes them where nobody can see them. Each child had a job to do to clean up.

S said "let's clean up the mess so the next person can play in it."

SAI

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	____
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	____
(4)	Attractive - Unattractive	0	1	2	[✓ 3]	4	5	____
(5)	Worthy, lovable -Unworthy	0	1	2	[✓ 3]	4	5	____

SWC

(6)	Important - Unimportant	0	1	2	[✓ 3]	4	5	____
(7)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	____
(8)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	____
(9)	Identified with - Alienated	0	1	2	[✓ 3]	4	5	____

SWA

(10)	Important - Unimportant	0	1	2	[✓ 3]	4	5	____
(11)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	____
(12)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	____
(13)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	____

SWT

(14)	Important - Unimportant	0	1	2	[✓ 3]	4	5	____
(15)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	____
(16)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	____
(17)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	____

SIS

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	____

SSC

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	____
(20)	Enough writing - Not	0	1	[✓ 2]	3	4	5	____
(21)	Enough numbers - Not	0	1	[✓ 2]	3	4	5	____
(22)	Enough music - Not	0	1	2	[✓ 3]	4	5	____
(23)	Enough art - Not	0	1	[✓ 2]	3	4	5	____

(24)	Enough oral exp. - Not	0	1	[✓ 2]	3	4	5	
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	
(26)	Enough games, etc. - Not	0	1	[✓ 2]	3	4	5	
POC								
(27)	Others Sat. - Dangerous	0	1	2	[✓ 3]	4	5	
(28)	Others friendly - Unfriendly	0	1	[✓ 2]	3	4	5	
POA								
(29)	Adults friendly - Hostile	0	1	[✓ 2]	3	4	5	
(30)	Adults helpful - Hindering	0	1	[✓ 2]	3	4	5	
(31)	Adults interested - Not	0	1	[✓ 2]	3	4	5	
(32)	Adults predictable -Unpred.	0	1	2	[✓ 3]	4	5	
POT								
(33)	Tchs. friendly - Hostile	0	1	[✓ 2]	3	4	5	
(34)	Tchs. helpful - Hindering	0	1	2	[✓ 3]	4	5	
(35)	Tchs. interested - Not	0	1	2	[✓ 3]	4	5	
(36)	Tchs. predictable - Unpred.	0	1	2	[✓ 3]	4	5	
POS								
(37)	Sch. is challenging - Boring	0	1	[✓ 2]	3	4	5	
(38)	Sch. helpful - Hindering	0	1	2	[✓ 3]	4	5	
(39)	Sch. happy place - Sad	0	1	[✓ 2]	3	4	5	

PST LEVEL:	Enumeration	Description	Interpretation simple - complex

CHILD

PERCEPTION SCORE SHEET

RATER # 12 **CODE #** 15-111

DATE **RECORD #** 3

TESTS - PLA **SIT** [✓ **PST - PT**]

RECORDS OF: **PC**

OBS. **1** **2** **3** **INT - PO**

SA (I) **Adequate - Inadequate** 0 1 2 [✓ 3] 4 5 3

DESCRIPTION:

S didn't want to sing - gave name, age, brothers, etc.

P-8 - They're playing ball and one little boy looking out window. Two girls are asking if they could play. They all get mad and hit the girls and the mothers make the girls play ball and make the boys come inside to play. That wasn't very nice of them. Soon the other boy came out and he asked if he could play and they said yes. Soon one of the girls got mad at him. She had to go back into the house. After they ate they all played together. Mother told them they had to.

A-7= Mother's washing dishes and the boy comes up to ask her what the card said. She said "It's a birthday card." It's his birthday and he'll be 7. His mother was going to make the cake and he would invite the people. First they sang "Happy Birthday", ate their ice cream and cake, played games, got their coats and went home.

P-11 - All these boys are talking and the little girl is listening. After they finished talking the girl went home and the boys went to the big boy's house and they got something to eat and started talking more until the mothers called them. After they ate they all played hide=and-go-seek and the girl was the first one it.

S-10 - This little girl is going to the nurse with a note because she's been absent. Then she took it to her T and T kept it. Then she had to work and after that got something to play with. Then resttime, then lunch. Then finished their work. Then they went home and played.

A-18 - Those two little girls were talking and she's going into the office with a paper. Those two girls don't like her. The next day they had to go to the playroom with her and after they got back they talked about her. They liked the playroom but didn't like her. Then they had to go back to their room to read a book to the T--to the person who took them to the playroom. They had to take their books to the playroom to read to her. They liked to read but not to her.

S-2 - This little boy took a walk to the net and the dog ran to the net and the boy ran after the dog. When he got back he had to go to school with the dog. T made him take the dog home and he had to come back to school. He asked the T if he could stay home with the dog - she said "yes". And he ran home to love his dog--and to play with it.

S-16= He's reading at school and is trying to figure out what a word is. Finally he had to ask the T. After he got the word done he still had to go back and forth. She made him go to a lower grade. He didn't like her for this. But he learned the words and went on to first, second then 3rd grade and stayed on with that T. He did his stories, read and did everything.

This little girl is feeling fairly comfortable and rather at ease about herself and her world. She feels that things could be better but she can get along nice enough as they are. Sometimes she feels unsure and recognizes some conflict with children. Home provides a comfortable place where she knows she belongs. Curriculum is another area where she has feelings of competence and it is satisfying. She feels T is one who is there to direct and she has good feelings about her most of the time.

SAI

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	2
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	3
(4)	Attractive - Unattractive	0	1	2	[✓ 3]	4	5	3
(5)	Worthy, lovable -Unworthy	0	1	2	[✓ 3]	4	5	3

SWC

(6)	Important - Unimportant	0	1	2	[✓ 3]	4	5	3
(7)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	2
(8)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	3
(9)	Identified with - Alienated	0	1	[✓ 2]	3	4	5	2

SWA

(10)	Important - Unimportant	0	1	2	[✓ 3]	4	5	3
(11)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	2
(12)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	2
(13)	Satisfactory to - Unsat.	0	1	[✓ 2]	3	4	5	2

SWT

(14)	Important - Unimportant	0	1	2	[✓ 3]	4	5	3
(15)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	2
(16)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	3
(17)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	3

SIS

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	2

SSC

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	2
(20)	Enough writing - Not	0	[✓ 1]	2	3	4	5	1
(21)	Enough numbers - Not	0	1	[✓ 2]	3	4	5	2
(22)	Enough music - Not	0	1	2	[✓ 3]	4	5	3
(23)	Enough art - Not	0	1	[✓ 2]	3	4	5	2

(24)	Enough oral exp. - Not	0	1	[✓ 2]	3	4	5	2
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	3
(26)	Enough games, etc. - Not	0	1	[✓ 2]	3	4	5	2
POC								
(27)	Others Sat. - Dangerous	0	1	2	[✓ 3]	4	5	3
(28)	Others friendly - Unfriendly	0	1	[✓ 2]	3	4	5	2
POA								
(29)	Adults friendly - Hostile	0	1	[✓ 2]	3	4	5	2
(30)	Adults helpful - Hindering	0	1	2	[✓ 3]	4	5	3
(31)	Adults interested - Not	0	1	2	[✓ 3]	4	5	3
(32)	Adults predictable -Unpred.	0	1	[✓ 2]	3	4	5	2
POT								
(33)	Tchs. friendly - Hostile	0	1	[✓ 2]	3	4	5	2
(34)	Tchs. helpful - Hindering	0	1	2	[✓ 3]	4	5	3
(35)	Tchs. interested - Not	0	1	2	[✓ 3]	4	5	3
(36)	Tchs. predictable - Unpred.	0	1	[✓ 2]	3	4	5	2
POS								
(37)	Sch. is challenging - Boring	0	1	[✓ 2]	3	4	5	2
(38)	Sch. helpful - Hindering	0	1	2	[✓ 3]	4	5	3
(39)	Sch. happy place - Sad	0	1	[✓ 2]	3	4	5	2

PST LEVEL: Enumeration Description Interpretation
simple - complex

CHILD

PERCEPTION SCORE SHEET

RATER # 9 **CODE #** 15-111

DATE 2/13/62 **RECORD #** 4

TESTS - F|A **SIT** **PST - PT**

RECORDS OF: **FC**

OBS. [✓ 1] 2 3 **INT - PO**

SA (1) **Adequate - Inadequate** 0 1 2 [✓ 3] 4 5 ________

DESCRIPTION:

Long hair, pony tail, valentine dress. S played with her doll for a few minutes. Then she got a paper, sat down at a table near the front of the room and began writing from the board. She is concentrating on the story and moving along fairly rapidly. Asks a girl beside her how to spell a word. S hasn't covered much ground with her writing. Most of her time has been spent in talking with the others at her table. S looks as though she receives a lot of attention at home. Her hair is very neatly combed. S told one of the girls that if she didn't be quiet she'd tell the teacher. Girl beside S agreed with her. S acted as though she was going but instead teacher asked her to get a book and read to her (teacher). Sis did this gleefully--seemed pleased to be asked. Looks like S is reading well and enjoying it.

I think S feels so-so about herself. She is not really sure of herself--it is important to her to be liked and she needs some attention from others. The teacher is an important person and S wants to please.

S likes other children but isn't always sure how to react with them, however, she seems to get along well with others and probably feels good about this.

SAI

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	____
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	____
(4)	Attractive - Unattractive	0	1	[✓ 2]	3	4	5	____
(5)	Worthy, lovable - Unworthy	0	1	2	[✓ 3]	4	5	____

SMC

(6)	Important - Unimportant	0	1	2	[✓ 3]	4	5	____
(7)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	____
(8)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	____
(9)	Identified with - Alienated	0	1	2	[✓ 3]	4	5	____

SMA

(10)	Important - Unimportant	0	1	2	3	4	5	____
(11)	Liked by - Not liked by	0	1	2	3	4	5	____
(12)	Able to cope - Unable	0	1	2	3	4	5	____
(13)	Satisfactory to - Unsat.	0	1	2	3	4	5	____

SWT

(14)	Important - Unimportant	0	1	[✓ 2]	3	4	5	____
(15)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	____
(16)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	____
(17)	Satisfactory to - Unsat.	0	1	[✓ 2]	3	4	5	____

SIS

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	____

SSC

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	____
(20)	Enough writing - Not	0	1	[✓ 2]	3	4	5	____
(21)	Enough numbers - Not	0	1	[✓ 2]	3	4	5	____
(22)	Enough music - Not	0	1	[✓ 2]	3	4	5	____
(23)	Enough art - Not	0	1	2	[✓ 3]	4	5	____

(24)	Enough oral w.p. - Not	0	1	[✓ 2]	3	4	5	________
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	________
(26)	Enough games, etc. - Not	0	1	2	[✓ 3]	4	5	________

POC

(27)	Others S.t. - Dangerous	0	1	[✓ 2]	3	4	5	________
(28)	Others friendly - Unfriendly	0	1	[✓ 2]	3	4	5	________

POA

(29)	Adults friendly - Hostile	0	1	2	3	4	5	________
(30)	Adults helpful - Hindering	0	1	2	3	4	5	________
(31)	Adults interested - Not	0	1	2	3	4	5	________
(32)	Adults predictable - Unpred.	0	1	2	3	4	5	________

POT

(33)	Tchs. friendly - Hostile	0	1	[✓ 2]	3	4	5	________
(34)	Tchs. helpful - Hindering	0	1	[✓ 2]	3	4	5	________
(35)	Tchs. interested - Not	0	1	[✓ 2]	3	4	5	________
(36)	Tchs. predictable - Unpred.	0	1	[✓ 2]	3	4	5	________

POS

(37)	Sch. is challenging - Boring	0	1	[✓ 2]	3	4	5	________
(38)	Sch. helpful - Hindering	0	1	[✓ 2]	3	4	5	________
(39)	Sch. happy place - Sad	0	1	[✓ 2]	3	4	5	________

PST LEVEL: Enumeration Description Interpretation simple - complex

PERCEPTION SCORE SHEET

RATER # 9

CODE # 15-111

DATE 2/15/62

RECORD # 5

TESTS - FLA SIT PST - PT

RECORDS OF: PC

OBS. 1 [✓ 2] 3 INT - PO

SA (1) **Adequate - Inadequate** 0 1 2 [✓ 3] 4 5 ______

DESCRIPTION:

S is sitting at a table close to another little girl writing her story from the board. The girls are laughing together and poking each other with their elbows. S got impatient when someone stood in front of the board. She didn't hesitate in asking her to move. S seems interested in the writing or maybe anxious to finish. She has been working quite steadily. Because people were in her way S brought her paper up to the front of the room, close to the board to finish. She finished and took her paper to the teacher who complimented her and wrote on the paper--She was told that her papers are better every day. S was pleased and rushed over to show her paper to her friend.

S went over to get some more writing paper--stops to chat with another girl and comes back to coloring table where five other girls are sitting and begins to color and to talk with the others. (S stops coloring in order to listen to the girl next to her reading a story) Resumes her coloring.

I think S feels pretty good about herself and her world. She feels comfortable with other children and with the teacher. S feels good about curriculum areas.

SAI

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	______
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	______
(4)	Attractive - Unattractive	0	1	[✓ 2]	3	4	5	______
(5)	Worthy, lovable -Unworthy	0	1	2	[✓ 3]	4	5	______

SMC

(6)	Important - Unimportant	0	1	2	[✓ 3]	4	5	______
(7)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	______
(8)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	______
(9)	Identified with - Alienated	0	1	2	[✓ 3]	4	5	______

SMA

(10)	Important - Unimportant	0	1	2	3	4	5	______
(11)	Liked by - Not liked by	0	1	2	3	4	5	______
(12)	Able to cope - Unable	0	1	2	3	4	5	______
(13)	Satisfactory to - Unsat.	0	1	2	3	4	5	______

SMT

(14)	Important - Unimportant	0	1	[✓ 2]	3	4	5	______
(15)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	______
(16)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	______
(17)	Satisfactory to - Unsat.	0	1	[✓ 2]	3	4	5	______

SIB

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	______

SSC

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	______
(20)	Enough writing - Not	0	1	[✓ 2]	3	4	5	______
(21)	Enough numbers - Not	0	1	[✓ 2]	3	4	5	______
(22)	Enough music - Not	0	1	[✓ 2]	3	4	5	______
(23)	Enough art - Not	0	1	2	[✓ 3]	4	5	______

(24)	Enough oral exp. - Not	0	1	[✓ 2]	3	4	5	______
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	______
(26)	Enough games, etc. - Not	0	1	2	[✓ 3]	4	5	______
POC								
(27)	Others Sat. - Dangerous	0	1	[✓ 2]	3	4	5	______
(28)	Others friendly - Unfriendly	0	1	[✓ 2]	3	4	5	______
POA								
(29)	Adults friendly - Hostile	0	1	2	3	4	5	______
(30)	Adults helpful - Hindering	0	1	2	3	4	5	______
(31)	Adults interested - Not.	0	1	2	3	4	5	______
(32)	Adults predictable -Unpred.	0	1	2	3	4	5	______
POT								
(33)	Tchs. friendly - Hostile	0	1	[✓ 2]	3	4	5	______
(34)	Tchs. helpful - Hindering	0	1	[✓ 2]	3	4	5	______
(35)	Tchs. interested - Not	0	1	[✓ 2]	3	4	5	______
(36)	Tchs. predictable - Unpred.	0	1	[✓ 2]	3	4	5	______
POS								
(37)	Sch. is challenging - Boring	0	1	[✓ 2]	3	4	5	______
(38)	Sch. helpful - Hindering	0	1	[✓ 2]	3	4	5	______
(39)	Sch. happy place - Sad	0	1	[✓ 2]	3	4	5	______

PST LEVEL:	**Enumeration**	**Description**	**Interpretation** **simple - complex**

CHECKED

PERCEPTION SCORE SHEET

RATER # 9 CODE # 15-111

DATE 2/16/62 RECORD # 6

TESTS - FIA SIT PST - PT

RECORDS OF: PC

OBS. 1 2 [✓ 3] INT - PO

SA
(I) Adequate - Inadequate 0 1 2 [✓ 3] 4 5 ______

DESCRIPTION:

S is sitting at a table close to the front of the room writing from the board. S chats with the children around her and occasionally gets up to talk to someone. S writes rapidly when she devotes her attention to the work--seems to form the letters easily. However, her attention strays frequently and she spends half of her time at least talking with or watching the other children.

(S seldom (not never) smiles--has kind of a sorrowful look on her face much of the time)

S took her paper to the teacher but had to wait while teacher did several things. S waited patiently. Teacher complimented her. S put her paper away. S then straightened out the reading chairs, arranged the rug and the chairs very neatly. She then sat down in a rocking chair with a book and began to read---Finish later.

Saw S after lunch and she was first reading to the teacher. When she finished she wandered around, went over and stood by two girls playing at the typewriter. Then a little girl invited her to play with paper dolls which she did enthusiastically.

S feels o.k. about herself but not really good. She feels liked but not always sought after. She feels pretty good about the teacher and about curriculum but not so good about other children--not bad but not good.

SAI

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	______
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	______
(4)	Attractive - Unattractive	0	1	[✓ 2]	3	4	5	______
(5)	Worthy, lovable -Unworthy	0	1	[✓ 2]	3	4	5	______
(6)								

SWC

(6)	Important - Unimportant	0	1	2	3	[✓ 4]	5	______
(7)	Liked by - Not liked by	0	1	2	[✓ 3]	4	5	______
(8)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	______
(9)	Identified with - Alienated	0	1	2	[✓ 3]	4	5	______

SWA

(10)	Important - Unimportant	0	1	2	3	4	5	______
(11)	Liked by - Not liked by	0	1	2	3	4	5	______
(12)	Able to cope - Unable	0	1	2	3	4	5	______
(13)	Satisfactory to - Unsat.	0	1	2	3	4	5	______

SWT

(14)	Important - Unimportant	0	1	2	[✓ 3]	4	5	______
(15)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	______
(16)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	______
(17)	Satisfactory to - Unsat.	0	1	[✓ 2]	3	4	5	______

SIS

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	______

SSC

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	______
(20)	Enough writing - Not	0	1	[✓ 2]	3	4	5	______
(21)	Enough numbers - Not ?	0	1	2	3	4	5	______
(22)	Enough music - Not	0	1	2	3	4	5	______
(23)	Enough art - Not	0	1	2	[✓ 3]	4	5	______

(24)	Enough oral exp. - Not	0	1	[✓ 2]	3	4	5	________
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	________
(26)	Enough games, etc. - Not	0	1	2	[✓ 3]	4	5	________
POC								
(27)	Others Sat. - Dangerous	0	1	2	[✓ 3]	4	5	________
(28)	Others friendly - Unfriendly	0	1	2	[✓ 3]	4	5	________
POA								
(29)	Adults friendly - Hostile	0	1	2	3	4	5	________
(30)	Adults helpful - Hindering ?	0	1	2	3	4	5	________
(31)	Adults interested - Not	0	1	2	3	4	5	________
(32)	Adults predictable -Unpred.	0	1	2	3	4	5	________
POT								
(33)	Tchs. friendly - Hostile	0	1	[✓ 2]	3	4	5	________
(34)	Tchs. helpful - Hindering	0	1	[✓ 2]	3	4	5	________
(35)	Tchs. interested - Not	0	1	[✓ 2]	3	4	5	________
(36)	Tchs. predictable - Unpred.	0	1	[✓ 2]	3	4	5	________
POS								
(37)	Sch. is challenging - Boring	0	1	2	[✓ 3]	4	5	________
(38)	Sch. helpful - Hindering	0	1	2	[✓ 3]	4	5	________
(39)	Sch. happy place - Sad	0	1	2	[✓ 3]	4	5	________

PST LEVEL:	Enumeration	Description	Interpretation simple - complex

CHILD

PERCEPTION SCORE SHEET

RATER # 9 CODE # 15-111

DATE 2/19/62 RECORD # 7

TESTS - FIA SIT PST - PT

RECORDS OF: PC

OBS. 1 2 3 [✓ INT - PO]

SA (I) Adequate - Inadequate 0 1 2 [✓ 3] 4 5 3

DESCRIPTION:

At first S seemed a little shy and hesitant to talk--answered my questions as briefly as possible. However, as soon as we got onto the playground she began to talk very openly. She told me about her family (volunteered this information) Her father is in construction work. He is home every night and sometimes in the afternoon-"sometimes he takes my brothers and me with him. I have three brothers--kindergarten, 3rd grade and 7th grade. They play pretty rough with me sometimes and they always want me to serve them--This gets pretty tiresome sometimes but I don't mind too much. Mother stays at home and cooks and takes care of the house--Sometimes I read my books to her at night. We have about 100 books to read. At home I like to ride my bike, color, and play with my friends (named two little girls) who live near me. School is fun-- I like reading and coloring best, other subjects are o.k. Teacher is nice and I have many friends (named several children) On the playground I like to swing best."(we were on the playground. S climbed half way up the pole and jumped from the swing.

I think in general S feels pretty good about herself (3) not very very positively but certainly not negatively. She likes school and other children. Feels comfortable. Home is a pretty good place too.

SAI

(2) Able - Unable 0 1 [✓ 2] 3 4 5 2

(3) Strong - Weak 0 1 2 [✓ 3] 4 5 3

(4) Attractive - Unattractive 0 1 [✓ 2] 3 4 5 2

(5) Worthy, lovable -Unworthy 0 1 2 [✓ 3] 4 5 3

(6)

SWC

(6) Important - Unimportant 0 1 2 [✓ 3] 4 5 3

(7) Liked by - Not liked by 0 1 2 [✓ 3] 4 5 3

(8) Able to cope - Unable 0 1 2 [✓ 3] 4 5 3

(9) Identified with - Alienated 0 1 2 [✓ 3] 4 5 3

SWA

(10) Important - Unimportant 0 1 2 [✓ 3] 4 5 3

(11) Liked by - Not liked by 0 1 [✓ 2] 3 4 5 2

(12) Able to cope - Unable 0 1 [✓ 2] 3 4 5 2

(13) Satisfactory to - Unsat. 0 1 2 [✓ 3] 4 5 3

SWT

(14) Important - Unimportant 0 1 2 [✓ 3] 4 5 3

(15) Liked by - Not liked by 0 1 [✓ 2] 3 4 5 2

(16) Able to cope - Unable 0 1 [✓ 2] 3 4 5 2

(17) Satisfactory to - Unsat. 0 1 2 [✓ 3] 4 5 3

SIS

(18) Adequate to cope - Inadequate 0 1 [✓ 2] 3 4 5 2

SSC

(19) Enough reading - Not 0 1 [✓ 2] 3 4 5 2

(20) Enough writing - Not 0 1 2 [✓ 3] 4 5 3

(21) Enough numbers - Not 0 1 2 [✓ 3] 4 5 3

(22) Enough music - Not 0 1 2 [✓ 3] 4 5 3

(23) Enough art - Not 0 1 [✓ 2] 3 4 5 2

(24)	Enough oral exp. - Not	0	1	2	[✓ 3]	4	5	3
(25)	Enough athletics - Not	0	1	2	[✓ 3]	4	5	3
(26)	Enough games, etc. - Not	0	1	2	[✓ 3]	4	5	3

POC

(27)	Others Sat. - Dangerous	0	1	2	[✓ 3]	4	5	3
(28)	Others friendly - Unfriendly	0	1	2	[✓ 3]	4	5	3

POA

(29)	Adults friendly - Hostile	0	1	2	[✓ 3]	4	5	3
(30)	Adults helpful - Hindering	0	1	[✓ 2]	3	4	5	2
(31)	Adults interested - Not	0	1	2	[✓ 3]	4	5	3
(32)	Adults predictable -Unpred.	0	1	2	[✓ 3]	4	5	3

POT

(33)	Tchs. friendly - Hostile	0	1	[✓ 2]	3	4	5	2
(34)	Tchs. helpful - Hindering	0	1	[✓ 2]	3	4	5	2
(35)	Tchs. interested - Not	0	1	2	[✓ 3]	4	5	3
(36)	Tchs. predictable - Unpred.	0	1	2	[✓ 3]	4	5	3

POS

(37)	Sch. is challenging - Boring	0	1	2	[✓ 3]	4	5	3
(38)	Sch. helpful - Hindering	0	1	2	[✓ 3]	4	5	3
(39)	Sch. happy place - Sad	0	1	2	[✓ 3]	4	5	3

PST LEVEL: Enumeration Description Interpretation
simple - complex

CHILD

PERCEPTION SCORE SHEET

RATER # 9, 12, 5
CODE # 15-111
DATE 2/19/62
4#
RECORD # 8

TESTS - PLA SIT PST - PT

RECORDS OF: [✓ PC]

OBS. 1 2 3 INT - PO

SA
1) Adequate - Inadequate 0 1 2 [✓ 3] 4 5 3

DESCRIPTION:

40 **SAI**

10

(2)	Able - Unable	0	1	[✓ 2]	3	4	5	2
(3)	Strong - Weak	0	1	2	[✓ 3]	4	5	3
(4)	Attractive - Unattractive	0	1	[✓ 2]	3	4	5	2
(5)	Worthy, lovable -Unworthy	0	1	2	[✓ 3]	4	5	3
(6)								

41 **SWC**

12

(6)	Important - Unimportant	0	1	2	[✓ 3]	4	5	3
(7)	Liked by - Not liked by	0	1	2	[✓ 3]	4	5	3
(8)	Able to cope - Unable	0	1	2	[✓ 3]	4	5	3
(9)	Identified with - Alienated	0	1	2	[✓ 3]	4	5	3

42 **SWA**

10

(10)	Important - Unimportant	0	1	2	[✓ 3]	4	5	3
(11)	Liked by - Not liked by	0	1	[✓ 2]	3	4	5	2
(12)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	2
(13)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	3

43 **SWT**

11

(14)	Important - Unimportant	0	1	2	[✓ 3]	4	5	3
(15)	Liked by - Not liked by	0	1	2	[✓ 3]	4	5	3
(16)	Able to cope - Unable	0	1	[✓ 2]	3	4	5	2
(17)	Satisfactory to - Unsat.	0	1	2	[✓ 3]	4	5	3

44 **SIS**

2

(18)	Adequate to cope - Inadequate	0	1	[✓ 2]	3	4	5	2

45 **SSC**

18

(19)	Enough reading - Not	0	1	[✓ 2]	3	4	5	2
(20)	Enough writing - Not	0	[✓ 1]	2	3	4	5	1
(21)	Enough numbers - Not	0	1	2	[✓ 3]	4	5	3
(22)	Enough music - Not	0	1	2	[✓ 3]	4	5	3
(23)	Enough art - Not	0	1	[✓ 2]	3	4	5	2

	(24)	Enough oral exp. - Not	0	1	[✓ 2]	3	4		5	2
	(25)	Enough athletics - Not	0	1	2	[✓ 3]	4		5	3
	(26)	Enough games, etc. - Not	0	1	[✓ 2]	3	4		5	2
46	**POC**									
	(27)	Others S.t. - Dangerous	0	1	2	[✓ 3]	4	6	5	3
	(28)	Others friendly - Unfriendly	0	1	2	[✓ 3]	4		5	3
47	**POA**									
	(29)	Adults friendly - Hostile	0	1	2	[✓ 3]	4	11	5	3
	(30)	Adults helpful - Hindering	0	1	2	[✓ 3]	4		5	3
	(31)	Adults interested - Not	0	1	[✓ 2]	3	4		5	2
	(32)	Adults predictable -Unpred.	0	1	2	[✓ 3]	4		5	3
48	**POT**									
	(33)	Tchs. friendly - Hostile	0	1	2	[✓ 3]	4	10	5	3
	(34)	Tchs. helpful - Hindering	0	1	2	[✓ 3]	4		5	3
	(35)	Tchs. interested - Not	0	1	[✓ 2]	3	4		5	2
	(36)	Tchs. predictable - Unpred.	0	1	[✓ 2]	3	4		5	2
49	**POS**									
	(37)	Sch. is challenging - Boring	0	1	2	[✓ 3]	4	9	5	3
	(38)	Sch. helpful - Hindering	0	1	2	[✓ 3]	4		5	3
	(39)	Sch. happy place - Sad	0	1	2	[✓ 3]	4		5	3

PST LEVEL:	Enumeration	Description	Interpretation simple - complex

BEHAVIORAL DATA SCORE SHEET-1

RATER # ____________ [✓ TR] CODE # 15-111

DATE 3-18-62 PCP 4-1 RECORD # ____________

GENERAL

(1)	Secure - Insecure	1	2	3	4	5	3
(2)	Independent - Dependent	1	2	3	4	5	3
(3)	Emotionally Stable - Unstable	1	2	3	4	5	3
(4)	Spontaneous - Rigid Flexible - Defensive	1	2	3	4	5	3
(5)	Aggressive - Retiring	1	2	3	4	5	3
(6)	Energetic - Apathetic	1	2	3	4	5	3
(7)	Attractive - Unattractive	1	2	3	4	5	1
(8)	Outgoing - Withdrawing	1	2	3	4	5	3
(9)	Cooperative - Uncooperative	1	2	3	4	5	1
(10)	Dependable - Undependable	1	2	3	4	5	1
(11)	Leadership (high-low)	1	2	3	4	5	3
(12)	Cheerful - Sad Happy - Sullen	1	2	3	4	5	2
(13)	Creativity (high-low)	1	2	3	4	5	2
(14)	Hostility (low-high)	1	2	3	4	5	3
(15)	Attention Span (long-short)	1	2	3	4	5	2
(17)	Accept. to boys (high-low)	1	2	3	4	5	1
(18)	Accept. to girls (high-low)	1	2	3	4	5	2
(19)	Accept. to high status peers (high-low)	1	2	3	4	5	2
(30)	Coordination of small muscles (good-poor)	1	2	3	4	5	3
(31)	Coordination of large muscles (good-poor)	1	2	3	4	5	3

31

SKILLS (High-Low)

24

(20) Reading	1	2	3	4	5	3
(21) Numbers	1	2	3	4	5	3
(23) Music	1	2	3	4	5	3
(24) Self-Care	1	2	3	4	5	1
(32) Oral expression	1	2	3	4	5	3
(33) Written expression	1	2	3	4	5	3
(34) Art	1	2	3	4	5	2
(35) Handwriting	1	2	3	4	5	3
(36) Work Habits	1	2	3	4	5	3

VITAL STATISTICS

(25) Chronological Age 78 months

(26) Mental Age ____ months

(27) Weight 44 lbs.

(28) Height 45 3/4 inches

(29) Absences due to illness (September to March 1) 18 days

(37) Sex M [✓ F]

BEHAVIORAL DATA SCORE SHEET - 1

RATER # 9, 12 5
DATE 2/19/62
TR [✓ PCP] 41
CODE # 15-111
RECORD # 9

GENERAL

(1)	Secure - Insecure	1	[✓ 2]	3	4	5	2
(2)	Independent - Dependent	1	[✓ 2]	3	4	5	2
(3)	Emotionally Stable - Unstable	1	[✓ 2]	3	4	5	3 2
(4)	Spontaneous, Flexible - Rigid Defensive	1	2	[✓ 3]	4	5	3
(5)	Aggressive - Retiring	1	2	[✓ 3]	4	5	3
(6)	Energetic - Apathetic	1	2	[✓ 3]	4	5	3
(7)	Attractive - Unattractive	1	[✓ 2]	3	4	5	2
(8)	Outgoing - Withdrawing	1	2	[✓ 3]	4	5	3
(9)	Cooperative - Uncooperative	1	[✓ 2]	3	4	5	2
(10)	Dependable - Undependable	1	[✓ 2]	3	4	5	2
(11)	Leadership (high-low)	1	2	[✓ 3]	4	5	3
(12)	Cheerful, Happy - Sad Sullen	1	2	[✓ 3]	4	5	3
(13)	Creativity (high-low)	1	2	[✓ 3]	4	5	3
(14)	Hostility (low-high)	1	[✓ 2]	3	4	5	2
(15)	Attention Span (long-short)	1	2	[✓ 3]	4	5	3
(17)	Accept. to boys (high-low)	1	[✓ 2]	3	4	5	2
(18)	Accept. to girls (high-low)	1	[✓ 2]	3	4	5	2
(19)	Accept. to high status peers (high-low)	1	[✓ 2]	3	4	5	2
(20)	Coordination of small muscles (good-poor)	[✓ 1]	2	3	4	5	1
(21)	Coordination of large muscles (good-poor)	1	2	[✓ 3]	4	5	3

37

18

SKILLS (High-Low)

(20) Reading	1	[✓ 2]	3	4	5	2
(21) Numbers	1	[✓ 2]	3	4	5	2
(22) Music	1	2	[✓ 3]	4	5	3
(24) Self-care	1	[✓ 2]	3	4	5	2
(32) Oral Expression	1	[✓ 2]	3	4	5	2
(33) Written Expression	1	[✓ 2]	3	4	5	2
(34) Art	1	[✓ 2]	3	4	5	2
(35) Handwriting	[✓ 1]	2	3	4	5	1
(36) Work Habits	1	[✓ 2]	3	4	5	2

VITAL STATISTICS

(25) Chronological Age ______________ months

(26) Mental Age ______________ months

(27) Weight ______________ lbs.

(28) Height ______________ inches

(29) Absences due to illness (September to March 1) ______________ days

(30) Sex M F

TABLE 46 APPENDIX 8

Loadings on Eight Perceptual Data Factors from Kindergarten PT Data

Variable No. & Name	I	II	III	IV	V	IX	X	XI	Communality
1. Adequate	92	-06	-11	02	02	-09	00	06	91
2. Able	88	-14	02	10	12	-06	-01	06	85
3. Strong	54	-07	-02	63	14	02	09	-03	72
4. Attractive	83	-11	09	10	-11	-05	05	-11	75
5. Worthy, Lovable	92	-04	02	02	-10	06	-01	11	90
6. Important to Children	77	-23	-16	22	08	11	03	15	78
7. Liked by Children	82	-10	-14	-04	01	23	21	-13	82
8. Able to cope with Children	73	11	-08	13	02	38	04	06	74
9. Identified with Children	73	-11	-08	11	14	36	16	10	75
10. Important to Adults	76	-12	-19	16	-09	-34	-11	16	81
11. Liked by Adults	79	-18	-13	-05	-10	-07	01	-32	82
12. Able to cope with Adults	71	13	-05	03	-41	-19	-17	-04	76
13. Satisfactory to Adults	87	05	-03	-08	-05	-03	-11	-12	80
14. Important to Teacher	56	39	00	25	10	-14	-11	14	67
15. Liked by Teacher	63	30	-09	-29	03	03	31	-15	75
16. Able to cope with Teacher	52	71	-12	01	-05	-13	18	08	85
17. Satisfactory to Teacher	64	52	-06	-25	14	01	19	01	80
18. Adequate to cope with School	87	14	-10	01	22	-02	05	09	85
19. Enough reading	70	-13	35	-22	14	-32	-06	12	81
20. Enough writing	66	-16	56	-34	06	-06	07	-01	90
21. Enough numbers	67	-13	44	-31	03	14	-04	12	79
22. Enough music	39	35	11	-12	06	01	-30	-03	45
23. Enough art	47	-09	08	-46	40	07	-02	-12	64
24. Enough oral expression	55	-09	16	17	13	-13	-28	-01	53
25. Enough athletics	44	02	-03	72	-05	05	06	-03	83
26. Enough games, etc.	55	03	12	-02	-10	-19	-12	-16	45
27. Others satisfactory	67	-04	08	19	-02	19	45	00	76
28. Others friendly	74	09	-01	09	06	33	-04	-08	85
29. Adults friendly	65	-16	-19	-24	-21	-05	-11	-33	77
30. Adults helpful	65	-01	-12	-37	-47	03	-05	03	79
31. Adults interested	65	04	05	-01	-13	-15	-05	40	63
32. Adults predictable	62	39	06	02	-24	-02	-43	01	72
33. Teachers friendly	55	59	-10	-20	10	10	-03	-03	63
34. Teachers helpful	43	56	-03	-30	-22	08	14	-03	71
35. Teachers interested	38	51	19	24	09	-02	-11	20	62
36. Teachers predictable	37	25	01	08	-04	03	-19	-15	72
37. School is challenging	63	15	31	07	-03	-12	-02	03	92
38. School is helpful	70	21	10	-10	13	06	-03	07	80
39. School is a happy place	90	11	00	-17	05	-09	00	-07	89
Communality	18.2	3.2	1.1	2.4	1.0	1.0	.24	.7	29.1
Percent of Variance	62.1	10.9	3.8	8.2	3.4	3.4	6.1	2.4	75.1

TABLE 47 APPENDIX C

Loadings on Eight Perceptual Data Factors from Kindergarten PD Data

Variable No. & Name	I	II	III	IV	V	VI	VII	VIII	Communality
1. Adequate	91	-25	03	02	-06	10	09	11	92
2. Able	[illegible]	-27	07	03	-10	00	20	16	85
3. Strong	[illegible]	-10	-03	55	08	-02	07	16	72
4. Attractive	[illegible]	-11	03	05	-07	-12	-05	01	74
5. Worthy, Lovable	[illegible]	-27	03	-08	01	-06	-11	02	65
6. Important to Children	[illegible]	-11	-10	05	13	-04	31	-14	83
7. Liked by Children	78	-11	00	03	-27	-10	16	-04	73
8. Able to cope with Children	79	-25	-05	-05	-07	00	36	03	82
9. Identified with Children	81	-03	-08	08	-09	-21	33	-11	84
10. Important to Adults	81	-09	-12	-05	04	-10	-22	-02	78
11. Liked by Adults	82	14	-02	-01	-05	-24	-35	-11	88
12. Able to cope with Adults	81	-15	11	-12	06	12	-29	-15	83
13. Satisfactory to Adults	84	-01	00	10	-04	17	-31	-10	85
14. Important to Teacher	74	12	-35	-14	10	17	00	-29	82
15. Liked by Teacher	76	41	-12	-06	02	-01	-11	01	78
16. Able to cope with Teacher	77	05	-05	-08	18	43	03	02	82
17. Satisfactory to Teacher	73	14	11	-13	01	32	-02	01	69
18. Adequate to cope with School	93	02	01	20	00	11	07	08	92
19. Enough reading	94	09	69	-03	-04	-04	-03	05	80
20. Enough writing	80	-03	56	06	07	-11	-15	04	72
21. Enough numbers	86	12	36	06	-30	15	04	-21	74
22. Enough music	61	13	00	-14	-15	10	-16	06	47
23. Enough art	55	-03	32	08	-13	13	-06	45	54
24. Enough oral expression	[illegible]	-18	07	-11	-05	-24	06	-05	68
25. Enough athletics	80	-02	-25	45	00	-03	04	00	67
26. Enough games, etc.	67	-10	-12	00	-16	-18	-18	18	58
27. Others satisfactory	77	-09	06	05	-01	10	21	11	67
28. Others friendly	80	-12	02	06	-10	00	37	01	81
29. Adults friendly	77	32	26	02	05	-22	-14	-19	87
30. Adults helpful	76	29	-06	-08	-02	-01	-39	02	82
31. Adults interested	82	00	-04	-13	20	04	-15	-01	76
32. Adults predictable	67	00	05	02	47	12	-18	-29	80
33. Teachers friendly	78	45	18	-05	[illegible]	-07	07	-05	84
34. Teachers helpful	57	53	-03	-15	15	21	-11	12	63
35. Teachers interested	73	70	-20	-03	12	15	28	-20	77
36. Teachers predictable	[illegible]	13	-09	-06	65	-36	02	-02	93
37. School is challenging	76	05	-25	-01	-13	01	-06	14	70
38. School is helpful	81	05	-09	-16	01	-11	-05	14	73
39. School is a happy place	86	02	04	02	02	-13	16	15	81
Communality	21.8	1.5	1.6	.8	1.4	.9	1.3	.8	30.1
Percent of Variance	72.4	5.0	5.3	2.7	4.7	3.0	4.3	2.7	77.2